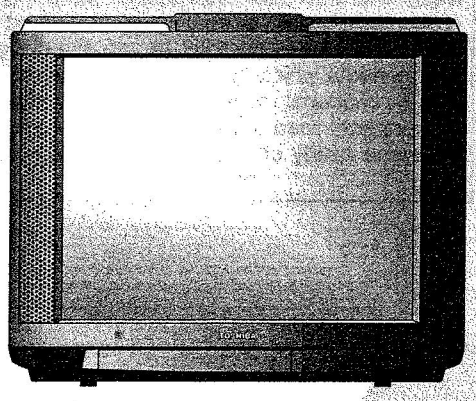
TOSHIBA

SERVICE MANUAL

COLOUR TELEVISION

F3SS Chassis

2979UH



PRINTED IN JAPAN, Jan., 1995 (So)

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 32.3 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 33.0 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.
   For continued safety, replacement component should only be made after referring the Product Safety Notice below.

SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 30.0 kV. Extreme caution should be exercised when working on the receiver with the back removed.
   Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.
   When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap
   The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
   Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

Features

Clearness Cathode-ray Tube C³*
Prevents electrostatic charge, reduces dust and sustains a high quality picture.

A variety of AV terminals for external equipment connection
- Two sets of video/audio inputs on the rear and one set on the front.
- S-VIDEO terminals.
- One set of monitor output terminals.

Selectable picture and selectable sound
Allows one-touch selection of your favourite picture quality and tone quality among three preset modes and one user-set mode.

NICAM and German stereo/bilingual broadcasts receivable

Off-timer and on-timer
Turns off the TV automatically and will turn it back on at a preset time.

*** Note on the C³ tube**
This TV employs a C³ type tube. Normally, the screen surface should not be cleaned; however, if it is essential, clean the surface with a soft, dry cloth while the TV is turned off. Never use any detergent cleaners to clean the surface. The screen surface may be scratched if a hard cloth is used.

Installation

- INSTALL the unit in a room where direct light will not fall upon the screen. Tonal darkness or a reflection on the picture screen may cause eyestrain. Soft and indirect lighting is recommended for comfortable viewing.
- ALLOW enough space between the unit and the wall for proper ventilation.
- AVOID excessively warm locations to prevent possible damage to the cabinet or components.
- RATED VOLTAGE: AC 110 V – 240 V, 50/60 Hz

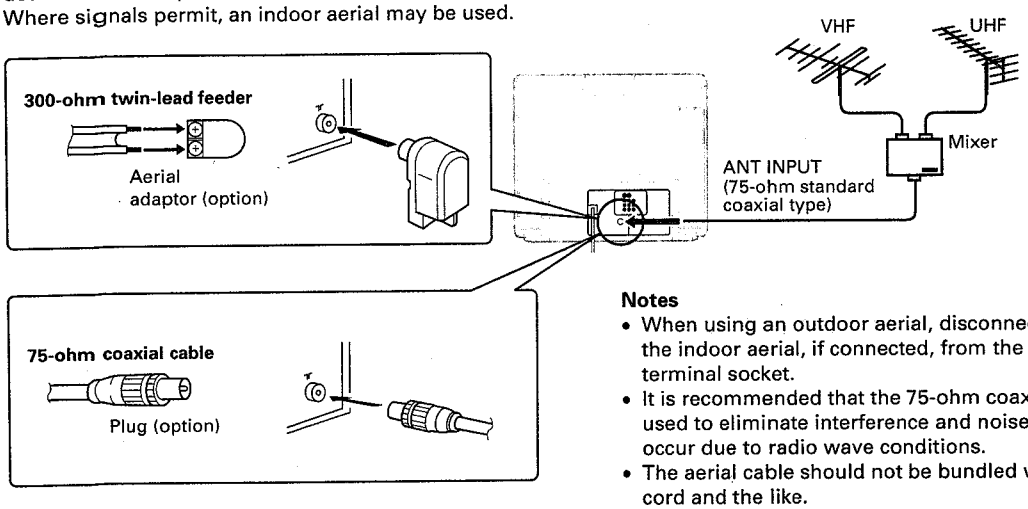
Automatic degaussing
All colour television receivers are sensitive to magnetic influences usually caused by either moving the receiver from one place to another or using certain electrical appliances near the receiver. This residual magnetism, as it is called, sometimes causes distortion which gives rise to "blotchy" areas of colour in the picture. To avoid these effects, the receiver incorporates an automatic degaussing switch. This circuit removes any residual magnetism in the metal parts of the picture tube and ensures that each time the receiver is turned "ON" using the main switch, the purity of the colours displayed on the screen remains true and lifelike. If the unit is moved or made to face a different direction, the main switch must be off at least 30 minutes in order for the automatic degaussing circuit to operate properly.

* Screen displays and illustrations in this manual may differ from the actual ones for better visibility.

Installation (continued)

To connect the aerial

Optimum reception of colour requires a good signal and will generally mean that an outdoor aerial must be used. The exact type and positioning of the aerial will depend upon your particular area. Your Toshiba dealer or service personnel can best advise you on which aerial to use in your area.
Where signals permit, an indoor aerial may be used.



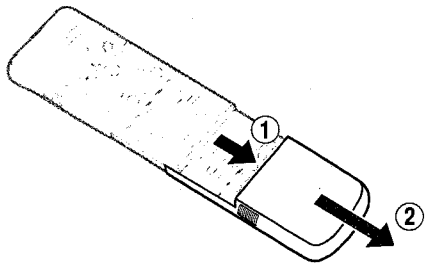
Notes

- When using an outdoor aerial, disconnect the leads of the indoor aerial, if connected, from the aerial terminal socket.
- It is recommended that the 75-ohm coaxial cable be used to eliminate interference and noise which may occur due to radio wave conditions.
- The aerial cable should not be bundled with the power cord and the like.

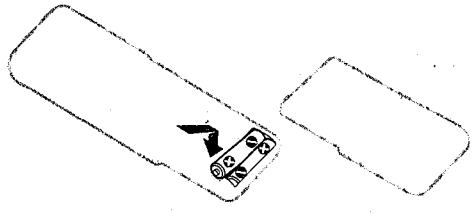
To operate the remote control

Battery installation

1 Remove the battery cover.

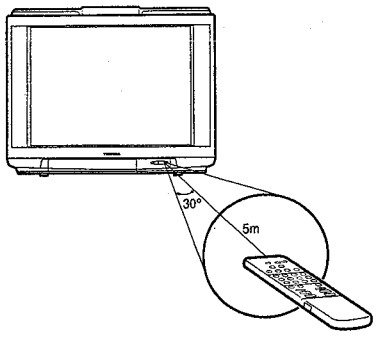


2 Insert two size AAA batteries matching the +/– polarities of the battery to the +/– marks inside the battery compartment.



Tips for remote operation

Effective range

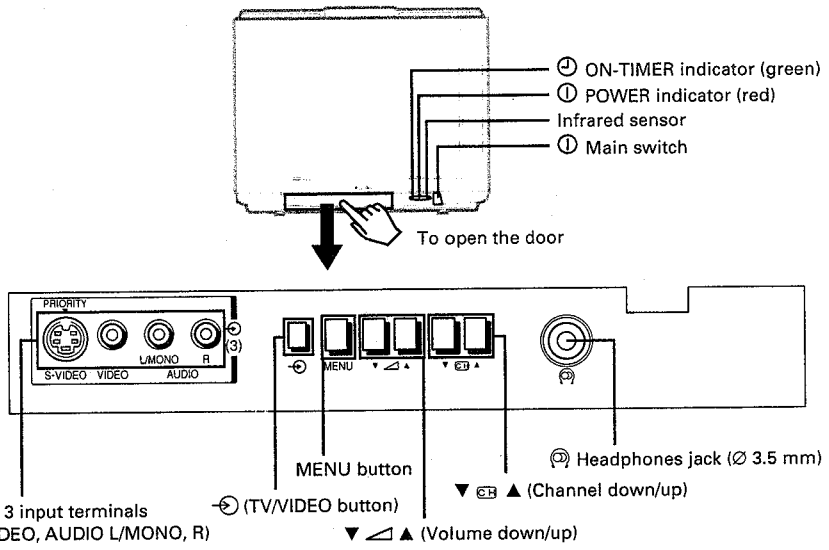


- The battery life should be about one year under normal use.
- When the remote control will not be used for a long period of time or when the batteries are worn out, remove the batteries to prevent leakage.
- Do not throw the batteries into a fire. Dispose of used batteries in the specified manner.
- Do not drop, dampen or disassemble the remote control.

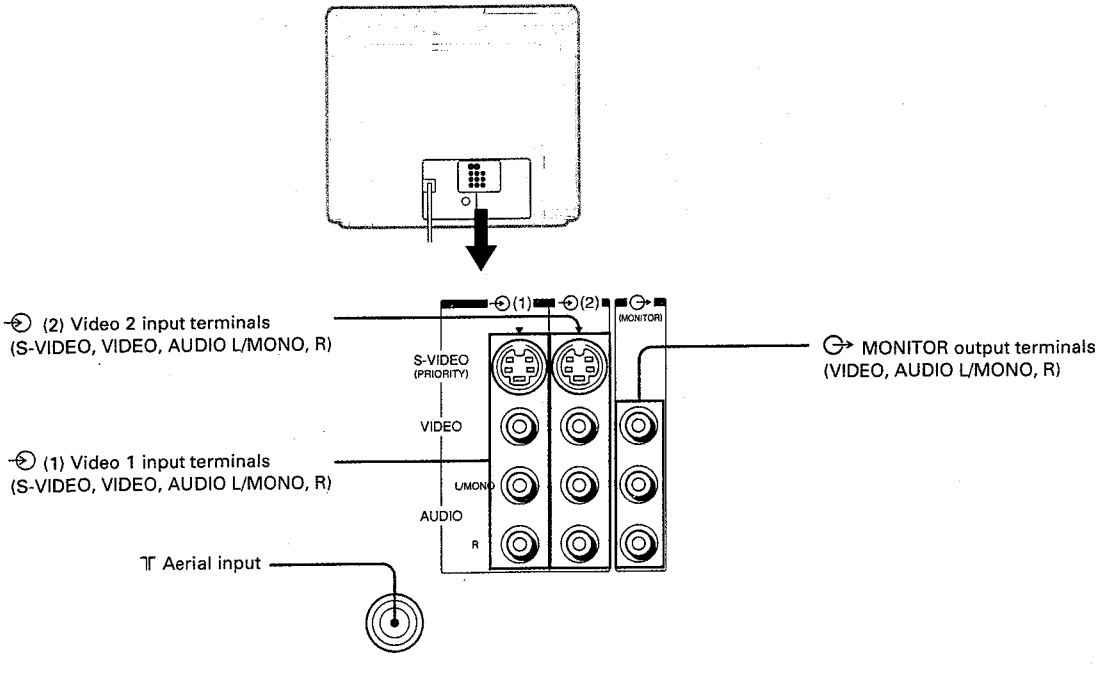
Identification of Controls

• The following describes the name of each part of the TV and remote control.

Front

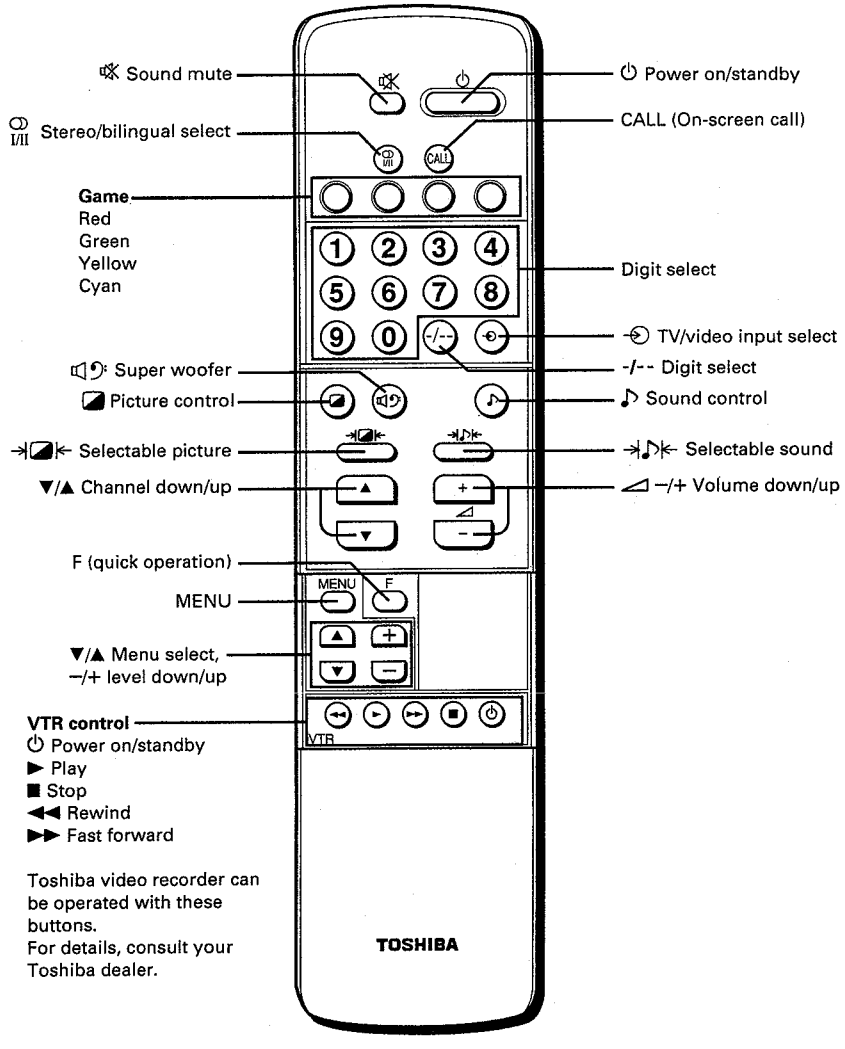


Back



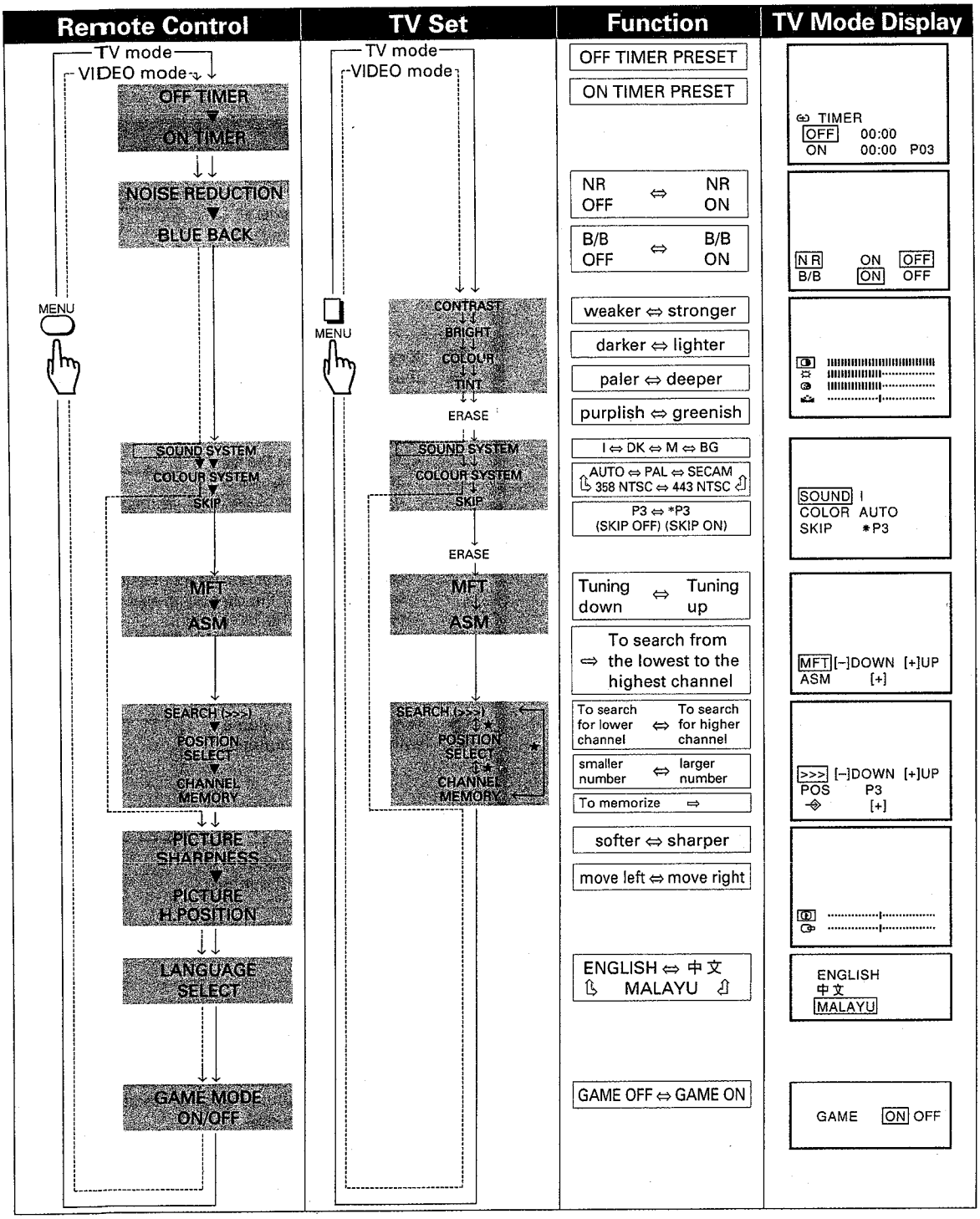
Identification of Controls (continued)

Remote control



Menu Function Flow Chart

- This TV can show the OSD (On-Screen-Display) in English, Mandarin or Malayan. See page 28 for details.



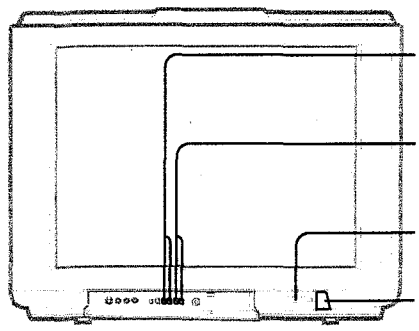
▼: means pressing ▼/▲ menu select
★: means pressing ▼ CH ▲ channel down/up

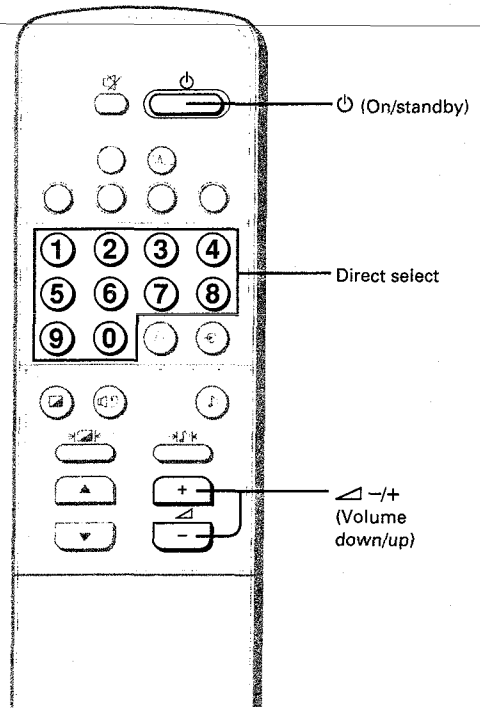
⇔: means pressing volume down/up
(⇐: volume down, ⇨: volume up)

Turning the Power On/Off

- The following describes how to turn the TV on/off using the TV's main switch and the remote control.

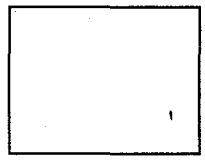
To turn the power on/off



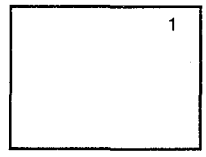


To turn the power on/off

1 Press the main switch. The red POWER indicator lights up.



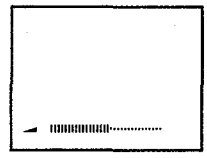
2 If no picture appears, press the ⏻ button on the remote control.



Notes

- You can turn on the set also by pressing one of the direct select buttons (0 – 9) instead of the ⏻ button.
  By pressing the number (one digit only) where the channel you want to watch is preset, you can turn on the set and channel selection at the same time. (For the channel preset procedures, refer to pages 10, 11 and 12.)
- When the remote control is not at your hand, you can turn on the set by pressing the ▼ ◿ ▲ or ▼ CH ▲ button on the TV set.

3 Adjust the sound volume with the ◿ –/+ buttons.



4 To switch to the standby mode, press the ⏻ button.

5 To turn off completely, press the main switch.

Auto-Power-Off

If a vacant channel is tuned or TV broadcast for a day is finished, the TV will automatically turn off after about 15 minutes. However, if the Off-timer is operating, it takes precedence. This Auto-Power-Off feature does not operate in the VIDEO mode.

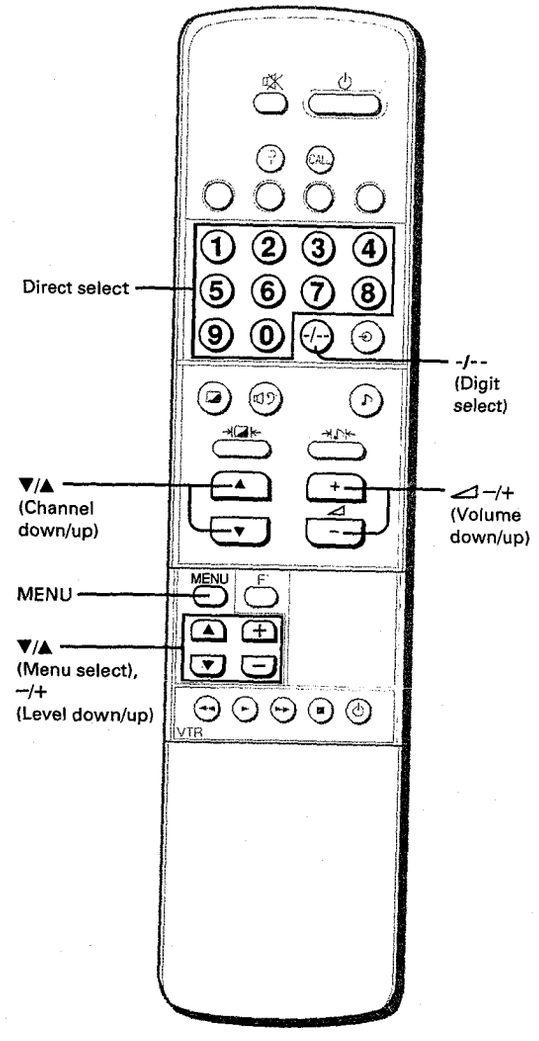
Last-Mode-Memory

Settings of picture and sound conditions and preset channels are stored in the memory even after turning off the power, therefore, the next time the power is turned on, the system will function in the last setting modes.

Watching TV Programmes

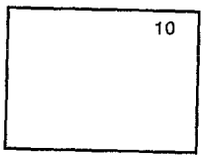
• You can watch TV programmes being broadcast on the preset channels.

To watch a TV programme



To select a TV programme

1 Select the desired programme.

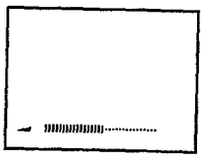


Using the direct select buttons

- To select a one-digit programme number: press the -/-- button to display "–" and 0 – 9 to select a number. (0 – 9)
- To select a two-digit programme number: press -/-- to display "--" and press 0 – 9 to select a number. (10 – 99)

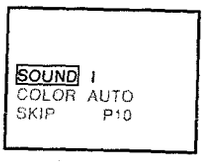
Using the channel down (▼)/up (▲) buttons
Press ▼ to select lower programme numbers; ▲ to select higher ones.

2 Adjust the sound volume with the ◿ -/+ buttons.



If the colour or sound of a certain channel is abnormal

The colour or sound system setting may be incorrect.
Press the MENU button to select the display on the right and change the setting as follows:
For the systems in each country, refer to page 32.



- **When the colour of the picture is abnormal**
  Highlight COLOR with the menu select ▼/▲ buttons and select the correct colour system with the level down (–)/up (+) buttons.
  AUTO, PAL, SECAM, 4.43NTSC and 3.58NTSC will appear cyclically.
- **When the sound is abnormal**
  Highlight SOUND with the menu select ▼/▲ buttons and select the correct sound system with the level down (–)/up (+) buttons.
  I, DK, M and BG will appear cyclically.

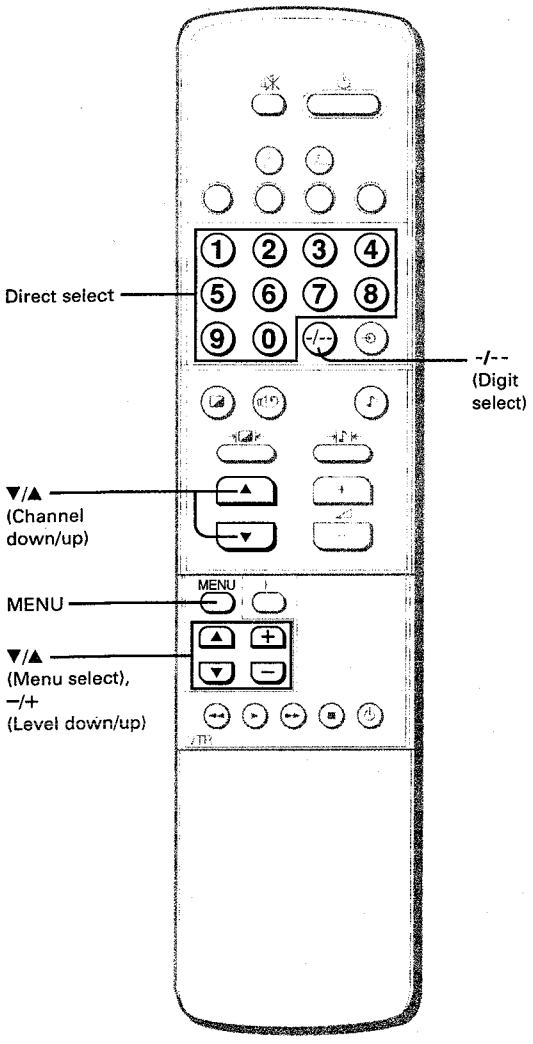
If the sound or picture of every channel is abnormal

Preset the channels using the ASM (Automatic Search Memory). See page 10.

Tuning in

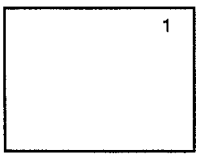
- First, use the **ASM** (Automatic Search Memory) function to preset all active channels in your area automatically.
  Then, arrange the preset channels with the SEARCH, MFT (Manual Fine Tuning) and SKIP functions so that you can tune into only desired channels.
- This section shows how to tune in channels using mainly the remote control. You can also perform the system select, ASM, skip and MFT operations using the buttons on the TV set. See page 7.

To preset channels (Automatic Search Memory)

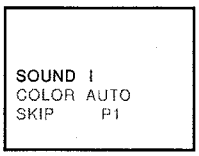


ASM (Automatic Search Memory)

1 Select the head of the programme number to start the ASM with the channel down/up buttons.

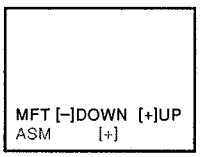


2 Press the MENU button repeatedly until you see the display on the right.

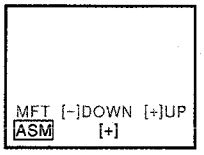


3 Confirm that COLOR is set to AUTO and SOUND is set to proper system.
If not, press the menu select ▼ (or ▲) button to highlight COLOR (or SOUND) and press the level down (–)/up (+) button to select each proper system.

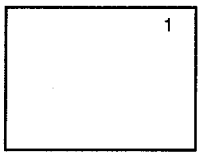
4 Press the MENU button repeatedly until you see the display on the right.



5 Press the menu select ▼/▲ buttons to highlight the ASM.



6 Press the level down/up "+" button to start the ASM.
All active channels will be preset automatically.
When presetting is complete, the initial programme number will reappear.

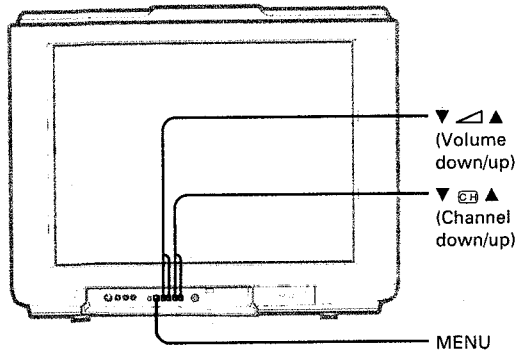


After presetting
Check the preset channels by pressing the channel down (▼)/up (▲) button.

- If the picture or sound of a certain channel is not good, fine-tune the channel using the MFT function. (See page 14.)
- If the colour or sound of a certain channel is abnormal, automatic colour system selection (AUTO) may malfunction.
  In this case, select the proper colour system. (See page 32.)

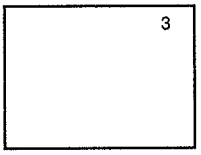
- Use the SEARCH function if desired channels cannot be preset with the ASM or if you would like to preset the desired channels to specific programme numbers one by one.

To preset channels (Manual search on the TV set)

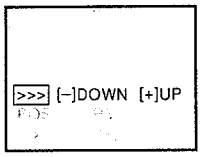


Manual search (>>>) on the TV set

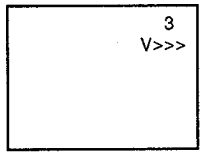
1 Select the desired programme number with the ▼ CH ▲ buttons.



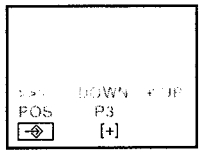
2 Press the MENU button repeatedly until you see the display on the right.



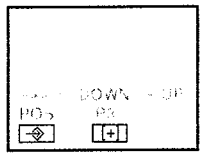
3 Press the ▼ ◿ ▲ buttons to start searching. The ▼ button searches for lower-numbered channels; the ▲ button for higher-numbered channels. When the unit locates a station, the display (>>>) disappears and the station enters into the memory wait status. Repeat this process until you can get the desired channel.



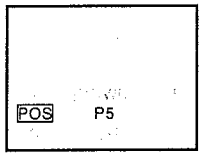
4 When the desired programme is shown, make the ◈ sign highlight with the ▼ CH ▲ buttons.



5 When you press the volume up (▲) button, the [+] sign on the display is highlighted momentarily, and the channel is memorized at the current position.



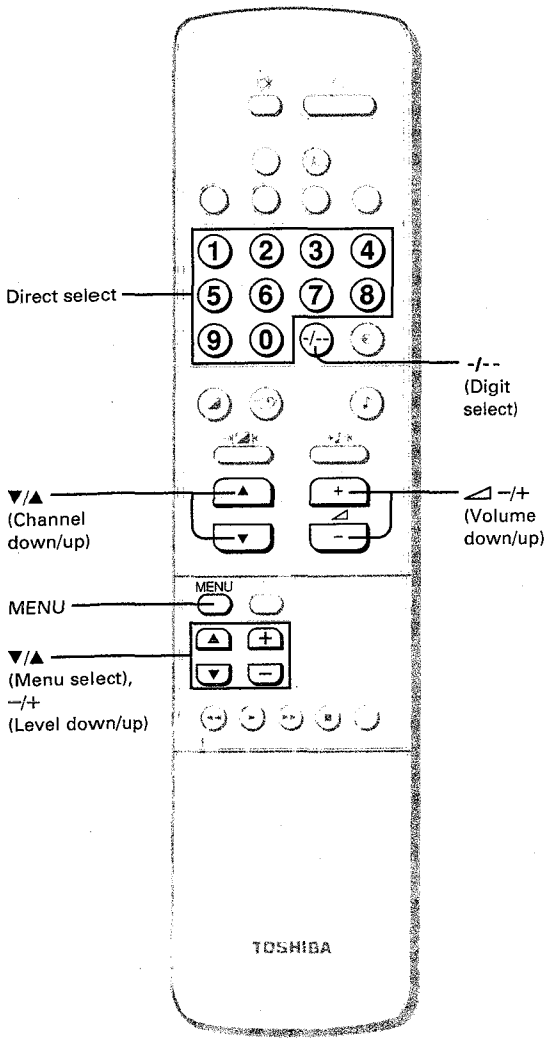
6 When you desire to store another channel at another position, make the POS sign highlight with the ▼ CH ▲ buttons and select a desired position with the ▼ ◿ ▲ buttons. Then, make the >>> sign highlight with the ▼ CH ▲ buttons again, and repeat the steps 3 to 5. Or, repeat the steps 1 to 5 after the display disappears.



Tuning in (continued)

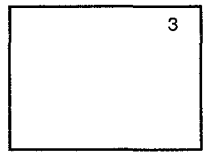
- Use the SEARCH function if desired channels cannot be preset with the ASM or if you would like to preset the desired channels to specific programme numbers one by one.

To preset channels (Manual search on the remote control)

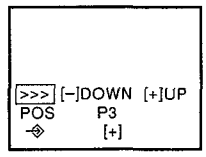


Manual search (>>>) on the remote control

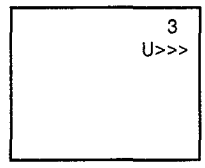
1 Select a programme number with the channel down (▼)/ up (▲) buttons or direct select buttons.



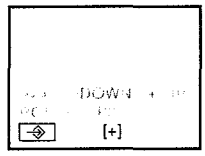
2 Press the MENU button repeatedly until you see the display on the right.



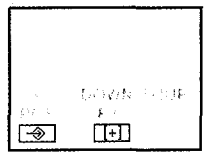
3 Press the ◿ −/+ buttons to start searching. The ◿ − button searches for lower-numbered channels; the ◿ + button for higher-numbered channels. When the unit locates a station, the display (>>>) disappears and the station enters into the memory wait status. Repeat this process until you can get the desired channel.



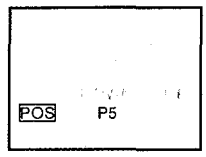
4 When the desired programme is shown, press the menu select ▼/▲ buttons repeatedly to make the ⇨ sign highlight.



5 When you press the ◿ + button, the [+] sign on the display is highlighted momentarily, and the channel is memorized at the current position.

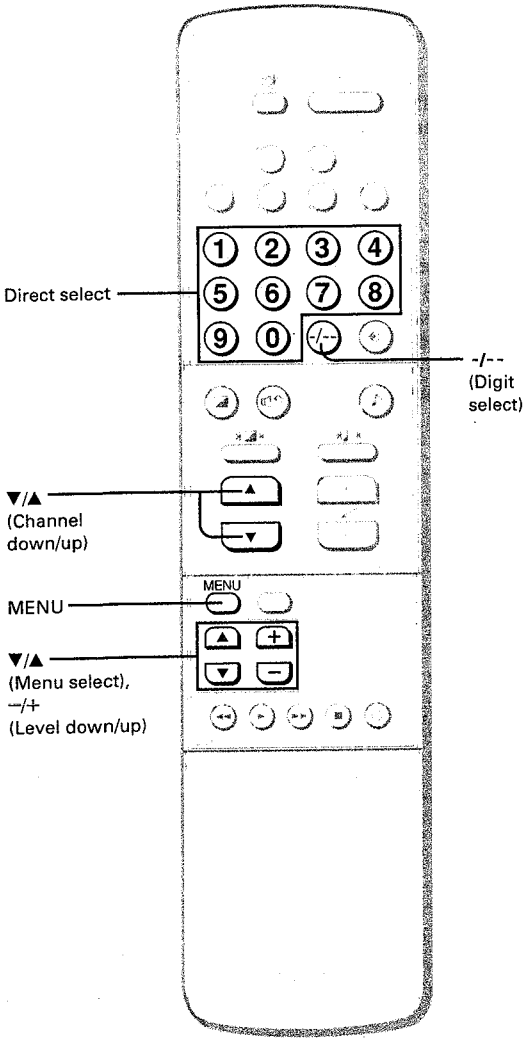


6 When you want to store another channel at another position, make the POS sign highlight with the menu select ▼/▲ buttons and select a desired position with the ◿ −/+ buttons. Then, press the MENU button repeatedly to make the >>> sign highlight, and repeat the steps 3 to 5. Or, repeat the steps 1 to 5 after the display disappears.



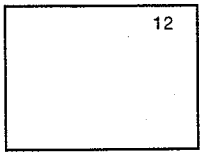
To skip unnecessary programme numbers

After presetting the channels, you may skip unnecessary programme numbers so that only the channels you want to watch are selected.

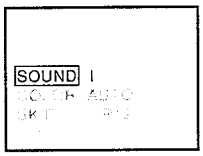


To skip a programme number

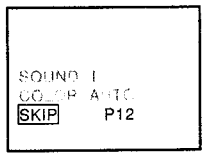
1 Select the programme number to be skipped with the channel down/up buttons or direct select buttons.



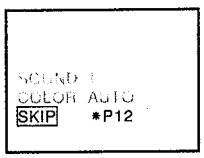
2 Press the MENU button repeatedly until you see the display on the right.



3 Press the menu select ▼/▲ buttons to highlight SKIP.



4 Press the level down (–)/ up (+) buttons so that the * mark appears to the left of the programme number. The programme number will then be skipped when you select the programme with the channel down/up buttons.



To restore a skipped programme number

1 Select the programme number you want to restore with the direct select buttons.

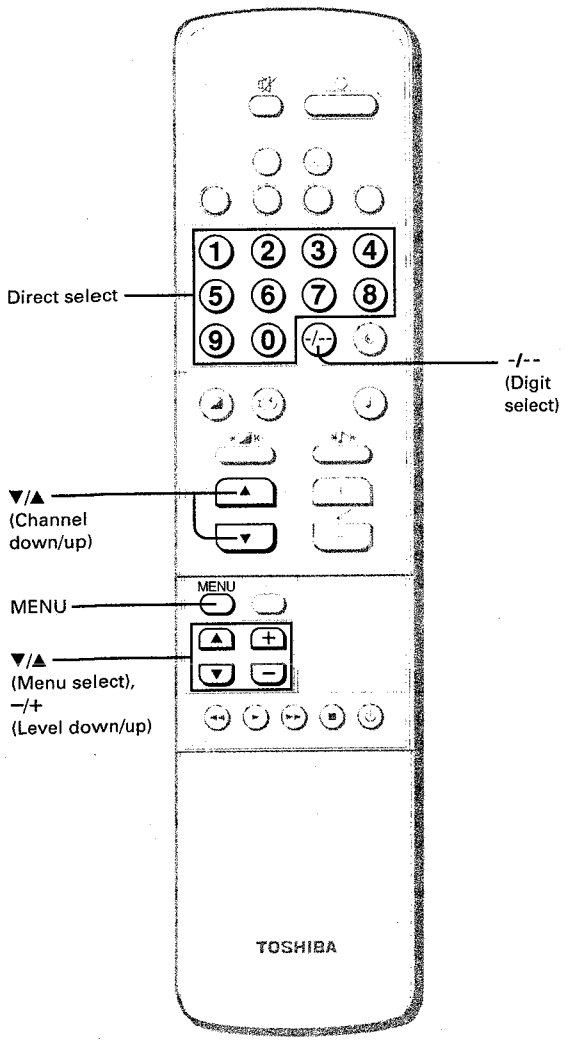
2 Press the MENU button to select the SKIP menu display and press the menu select ▼/▲ buttons to highlight SKIP.

3 Press the level down (–)/up (+) buttons to delete the * mark.

Tuning in (continued)

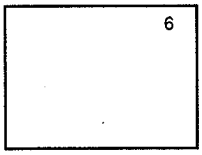
MFT (Manual Fine Tuning)

Use this function only when the picture and sound of a certain channel are not good.

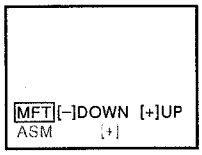


To operate the manual fine tuning

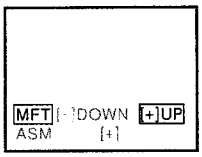
1 Select the programme number you want to fine-tune with the channel down /up buttons or direct select buttons.



2 Press the MENU button until you see the display on the right.



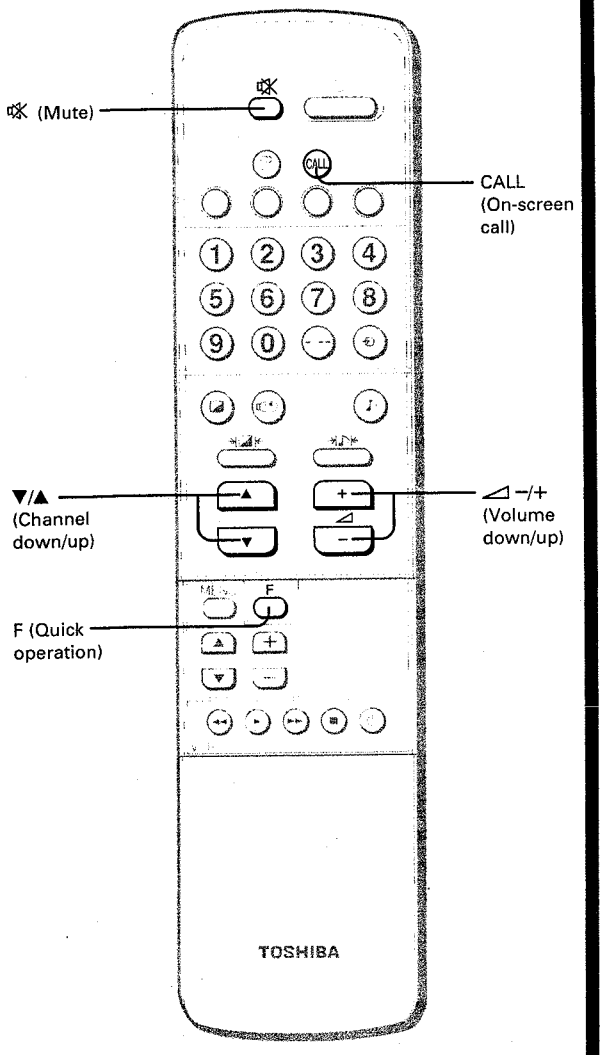
3 Hold down the level down (–) /up (+) buttons until the best possible picture and sound are obtained.
[–] DOWN or [+] UP is highlighted while tuning in.



Convenient Picture and Sound Controls

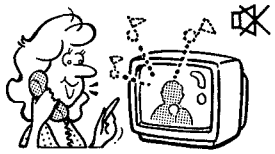
- You can select and adjust the picture and sound quality as you like.

Sound muting and on-screen calling



To mute the sound

The muting function is convenient when you need to pay attention to surrounding sounds, answer a phone call, receive a visitor,etc.



1 Press the button.

2 To restore the sound, press the button again.

To retain the on-screen display

Generally, the programme number and the (stereo) or I/II (bilingual) reception indicator will disappear within 4 seconds once the programme number has been changed.

1 To retain the programme number on the screen, press the CALL button.

2 To return to the automatic-disappearing mode, press the CALL button again.

To select the programme number rapidly

When you select a programme number, press the F button and the channel down (▼)/up (▲) button simultaneously. The programme number decreases or increases by 10.

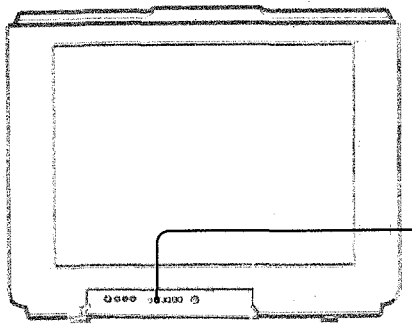
To change the volume rapidly

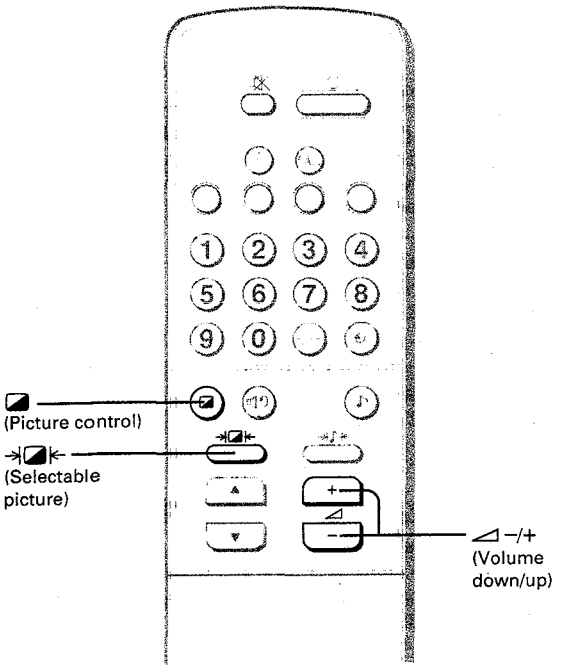
When you adjust the volume, press the F button and the – or + button simultaneously. The volume changes rapidly.

Convenient Picture and Sound Controls (continued)

Selectable picture

You can select the picture quality instantly among three preset modes and one user-set mode.

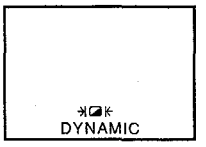




To select the picture mode

Press the →◪← button to select the desired picture quality.

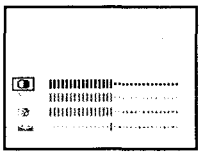
DYNAMIC, STANDARD, MEMORY (user-set) and MILD can be selected cyclically.



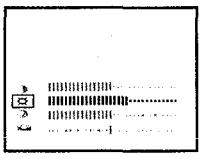
Mode	Picture quality
DYNAMIC	bright and dynamic picture
STANDARD	standard picture
MEMORY	the picture quality you set
MILD	soft and moody picture

To set the desired picture quality to the MEMORY position

1 Press the ◪ button.
The picture control menu appears.



2 Press the ◪ button to highlight the desired item, and press the ◿ −/+ button to adjust the level.



Item		Pressing	
		−	+
◑	contrast	weaker	stronger
☼	brightness	darker	lighter
◉	colour	paler	deeper
◒	tint *	purplish	greenish

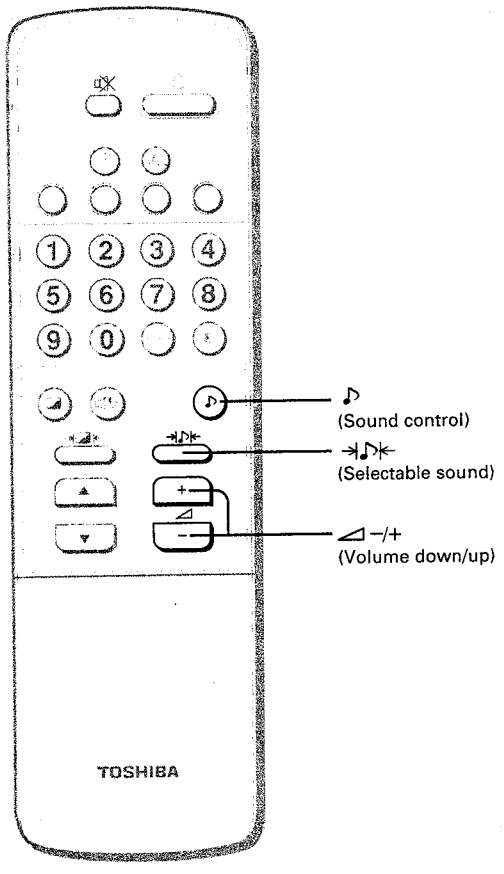
* for NTSC only

The adjusted level is stored in the MEMORY position.

Note: You can also select the picture quality function with the MENU button on the TV set. (See page 7.)

Selectable sound

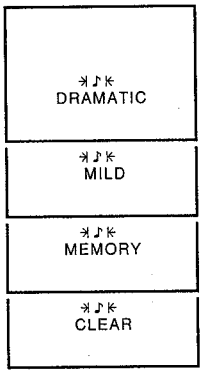
You can select the sound quality instantly from three preset modes and one user-set mode.



To select the sound mode

Press the button to select the desired sound quality.

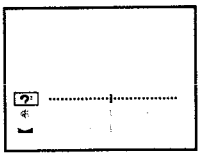
DRAMATIC, MILD, MEMORY (user-set) and CLEAR can be selected cyclically.



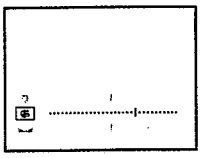
Mode	Sound quality
DRAMATIC	A movie theater filled with a dynamic sound
MILD	A concert hall filled with a rich warm sound
MEMORY	The sound quality you set
CLEAR	News/dialogue

To set the desired sound quality to the MEMORY position

1 Press the ♪ button.
The sound control menu appears.



2 Press the ♪ button to highlight the desired item, and press the –/+ button to adjust the level.



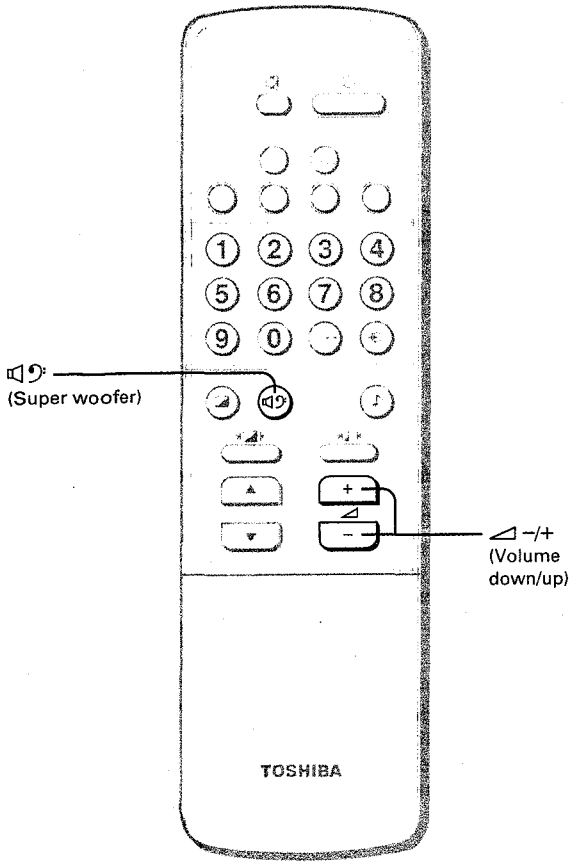
Item		Pressing	
		–	+
	bass	weaker	stronger
	treble	weaker	stronger
	balance	increases the left channel	increases the right channel

The adjusted level is stored in the MEMORY position.

Enjoying the Dynamic Sound Presence/Super Woofer

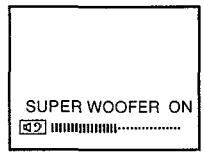
• With Toshiba's dynamic sound presence, the TV can reproduce various sound effect.

To select the sound effect

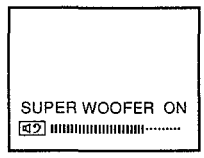


To use the super woofer

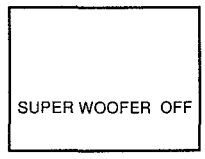
1 Press the button repeatedly until SUPER WOOFER ON is displayed.



2 While the SUPER WOOFER ON is displayed on the screen, adjust the super woofer level using the −/+ buttons.



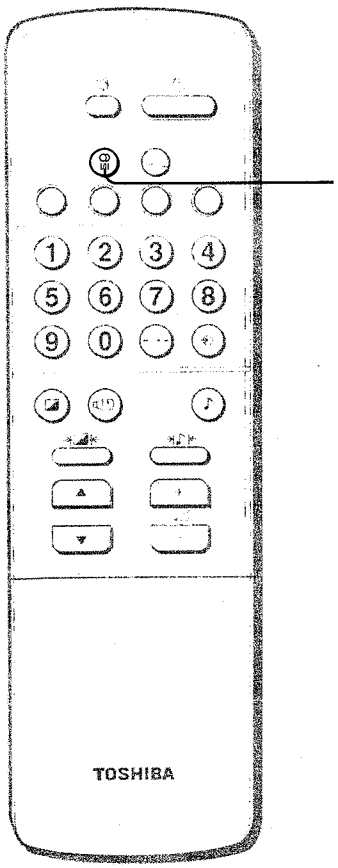
3 To turn off the super woofer, press the button to display SUPER WOOFER OFF.



Enjoying Stereo and Bilingual Broadcasts

- The unit receives both stereo and bilingual broadcasts transmitted in either the NICAM or German stereo/bilingual broadcast system.

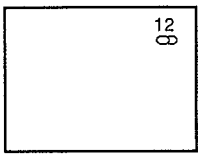
To select the stereo/bilingual mode



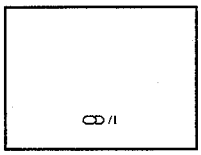
If stereo sound is noisy
If a broadcasting signal is not strong enough and noise-free stereo sound is not available, press the I/II button until the ▽ indicator appears on the screen (monaural mode). The noise should be reduced.

Stereo programmes

1 When a stereo programme is received, ⊂⊃ appears.



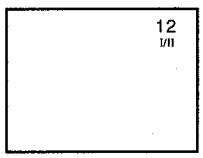
2 Press the I/II button to select the stereo/monaural mode. ⊂⊃ /I, ⊂⊃ /II and ▽ appear cyclically on the screen.



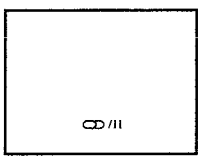
Display	Reception mode
⊂⊃ /I	Stereo
⊂⊃ /II	Stereo
▽	Monaural

Bilingual programmes

1 When a bilingual programme is received, I/II appears.



2 Press the I/II button to select the sound to be heard. The sound differs according to the transmission system: NICAM or German stereo/ bilingual broadcast. ⊂⊃ /I, ⊂⊃ /II and ▽ appear cyclically on the screen.

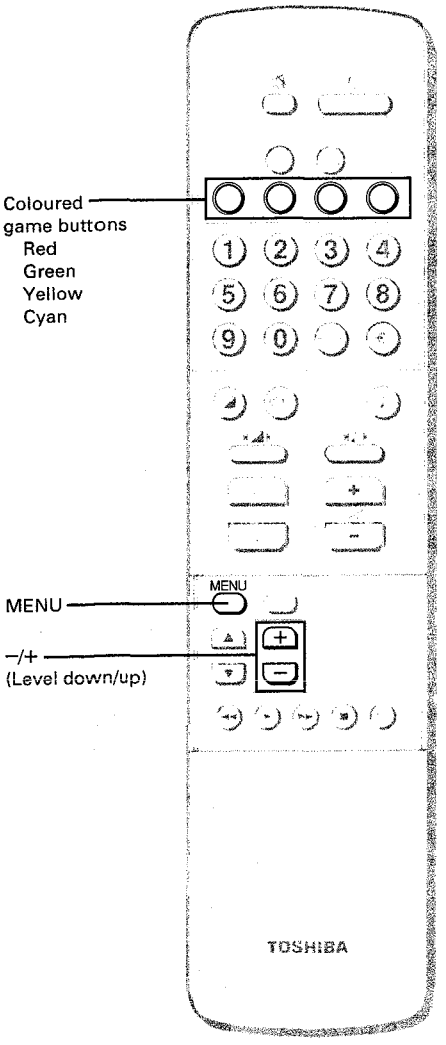


Display	Sound to be heard	
	NICAM	German stereo/ bilingual broadcast
⊂⊃ /I	Sub I sound	Main sound
⊂⊃ /II	Sub II sound	Sub sound
▽	Main sound	Main sound

Enjoying TV Games

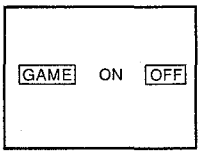
• You can enjoy three games, SLOT, HIT, DICE, programmed in this TV.

To play TV games

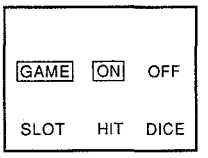


To select the TV game mode

1 Press the MENU button repeatedly until you see the display on the right.



2 Press the level down(–)/up(+) buttons to highlight "ON". The TV turns blue, and the names for the three games appear at the bottom of the screen.



Note
The sound mode set in the normal TV mode remains the same in the game mode.

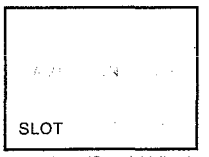
To cancel the TV game mode

Press the level down(–)/up(+) buttons again to highlight "OFF". The TV resets to the TV mode.

To play "SLOT"

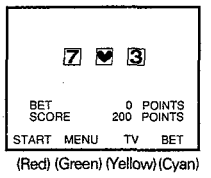
This is a slot machine game.

1 Select the TV game mode, and press the **red** button to select "SLOT".



(Red) (Green) (Yellow)

2 The display on the right appears.



(Red) (Green) (Yellow) (Cyan)

Item explanation:

BET	*Points to bet.* Press the **cyan** button once to add 1 POINT to the BET POINTS. A BET must be placed before playing the game. As many as 10 POINTS can be bet at a time.
SCORE	Your current SCORE. You start out with 200 POINTS. Points are won or lost, depending upon how much is bet.

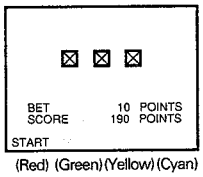
To play TV games (continued)

Press the **cyan** button to set the BET POINTS.

Ex. BET 10 POINTS

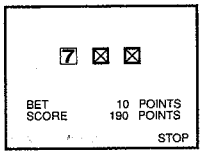
Note
Numbers 1 through 8 and the pictogram ♥ appear randomly in each window, one by one.

3 Press the **red** button to start the game. Each window turns to quick and random change mode simultaneously.
The "BET" displayed on the right bottom of the screen changes to "STOP".

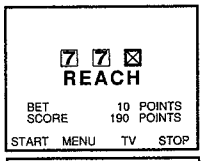


(Red) (Green) (Yellow) (Cyan)

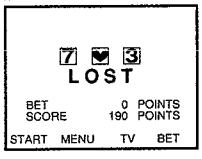
4 The windows change from left to right, one by one, each time you press the **cyan** button.
Messages appear, depending on the window combination:



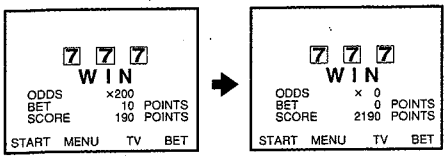
When the first two windows are the same
"REACH" appears in the centre of the screen.



When no windows are the same
"LOST" appears in the centre of the screen, and the current bet is lost.
"STOP" changes to "BET", and the game returns to the BET mode.

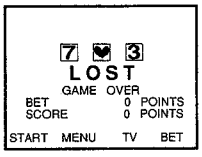


When two or all the three windows are the same
"WIN" appears. "ODDS × ___" is displayed, and your BET is multiplied by "___". This total is added to your SCORE. The BET setting is then reset to 0.
"STOP" changes to "BET", and the game returns to the BET mode.



5 After pressing the **cyan** button three times, all three windows stop changing.
Repeat steps 2 through 4 to play again. Good luck!

6 When your SCORE is 0, the game ends. "GAME OVER" appears. (Hard luck!)



To play again
Press the **green** button, and go back to step 1.

To play other games
Press the **green** button to display the GAME menu.

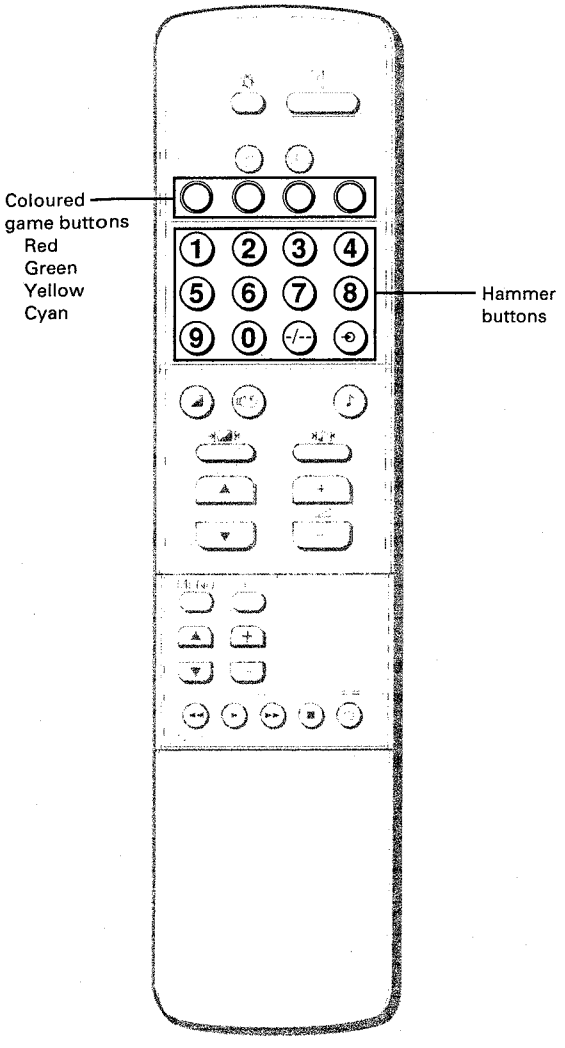
To return to the TV mode
Press the **yellow** button.

Note
The odds and payback vary according to the following window combinations.

Combination	Odds
7 7 2	× 5
7 2 7	× 5
2 7 7	× 5
♥ ♥ ✻	× 10
♥ ✻ ♥	× 10
✻ ♥ ♥	× 10
♥ ♥ ♥	× 300
1 1 1	× 100
2 2 2	× 100
3 3 3	× 100
4 4 4	× 100
5 5 5	× 100
6 6 6	× 100
8 8 8	× 100
7 7 7	× 200

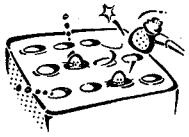
Enjoying TV games (continued)

To play TV games (continued)

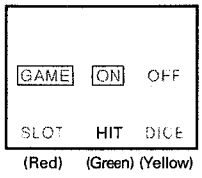


To play "HIT"

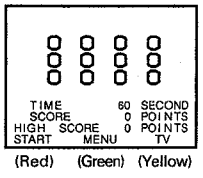
This is a hit-the-mole game.



1 Select the TV game mode, and press the **green** button to select "HIT".



2 The display on the right appears.



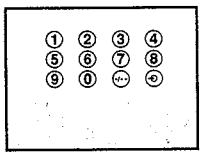
Item explanation:

TIME	Shows the time remaining, starting from 60 SECONDs
SCORE	The number of moles hit
HIGH SCORE	The highest score in this current TV game mode session

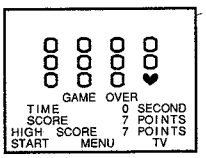
Twelve "O" appear, indicating holes in the ground. When the game starts, the "O"s turn to "♥"s randomly. This means a mole is sticking his head out of the hole.

To play TV games (continued)

3 To hit the moles sticking out, press the hammer button on the remote control corresponding to the hole. See the display on the right. If you hit the mole before he disappears, the "♥" becomes an "×", and you score a POINT.



4 Press the **red** button to start the game. When 60 SECONDs have elapsed, the game is over, and the total number of moles you hit appears as the SCORE.



To play again

Press the **red** button.

To play other games

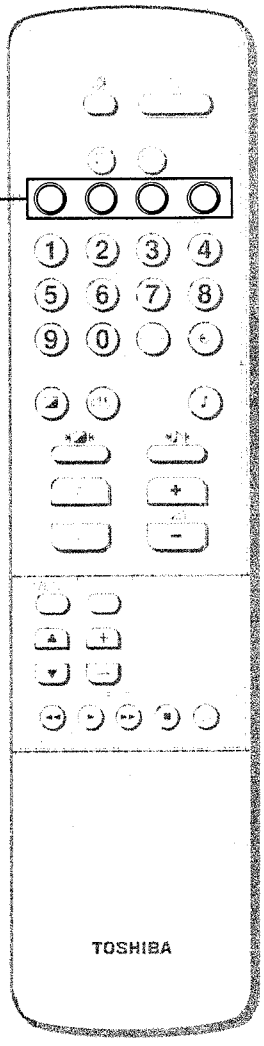
Press the **green** button to display the GAME menu.

To return to the TV mode

Press the **yellow** button.

Enjoying TV games (continued)

To play TV games (continued)

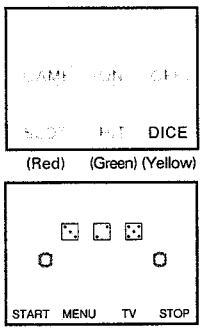


To play "DICE"

This is a dice game in which two players compete by casting three dice and totaling the score.

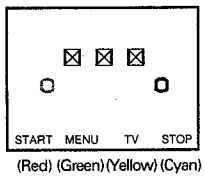
1 Select the TV game mode, and press the **yellow** button to select "DICE".

The display on the right appears.
The right "0" and the left "0" are the scores for player 1 and player 2, respectively.

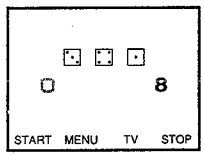


2 Press the **red** button to start the game.
The three dice start spinning randomly for player 1.

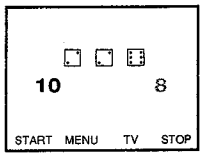
Note
The initial spots on the dice are random.



3 Press the **cyan** button repeatedly to stop the dice one at a time, from left to right. When all the dice are stopped, the total of the dice is added to the score for player 1.



4 Switch to player 2, and repeat steps 2 and 3.
The dice total is added to the score for player 2.



5 Repeat steps 2 through 4 to play again.

To play other games

Press the **green** button to display the GAME menu.

To return to the TV mode

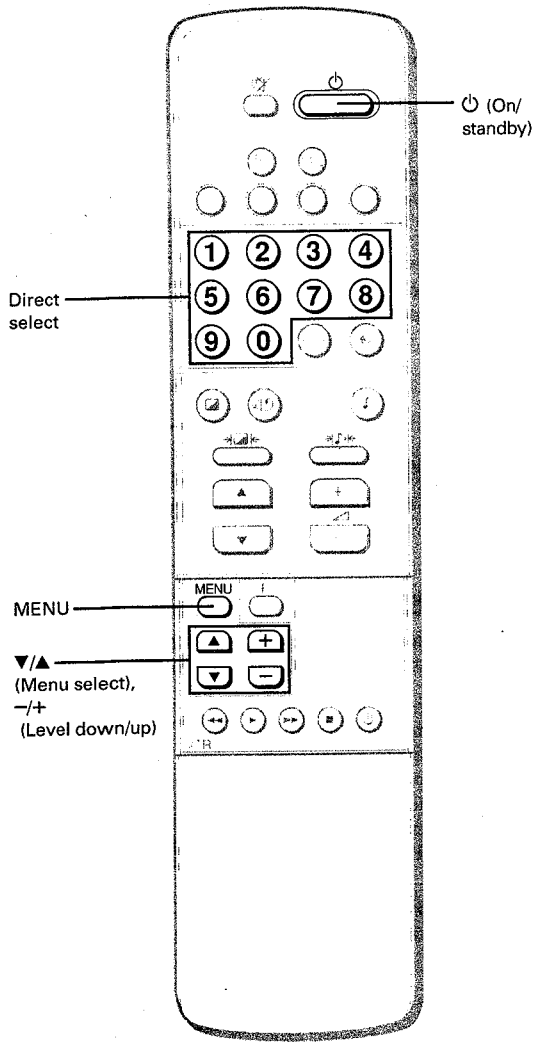
Press the **yellow** button.

ADVANCED OPERATION

Using Other Menus

- In addition to the three menus previously explained, the unit has three other menus for additional functions.

ON/OFF timer



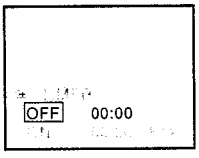
If you enter an incorrect number while setting the ON/OFF timer.
Re-enter the time with the direct select buttons.

Note
The maximum presettable time for the ON/OFF timer is 12:59. The maximum programme number for the ON timer is P99 (Programme number 99).

To turn off the TV automatically (OFF timer)

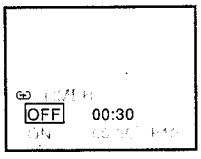
With the OFF timer, the TV will automatically switch to standby mode at a preset time.

1 Press the MENU button repeatedly to display the menu on the right and press the menu select ▼ (or ▲) button to highlight OFF (OFF timer).



2 Press the direct select buttons to set after how many hours and minutes you want the TV to switch into the standby mode.

Ex. 30 minutes
Press 0, 0, 3 and 0.



Once the preset time has elapsed, the TV will automatically go into standby mode.

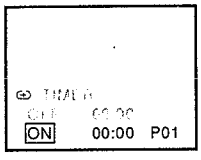
To cancel the OFF timer

Press the ⏻ button twice (to turn off the TV once and turn it on again) or in step 2 above set the OFF time to 00:00.

To turn on the TV automatically (ON timer)

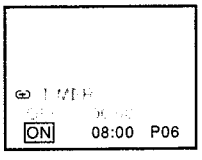
With the ON timer, the TV will automatically turn on to a preset channel at a preset time.

1 Press the MENU button repeatedly to display the menu on the right and press the menu select ▼ (or ▲) button to highlight ON (ON timer).



2 Press the direct select buttons to set the TV ON time and programme number.

Ex. 8 hours, programme number 6
Press 0, 8, 0, 0, 0 and 6.



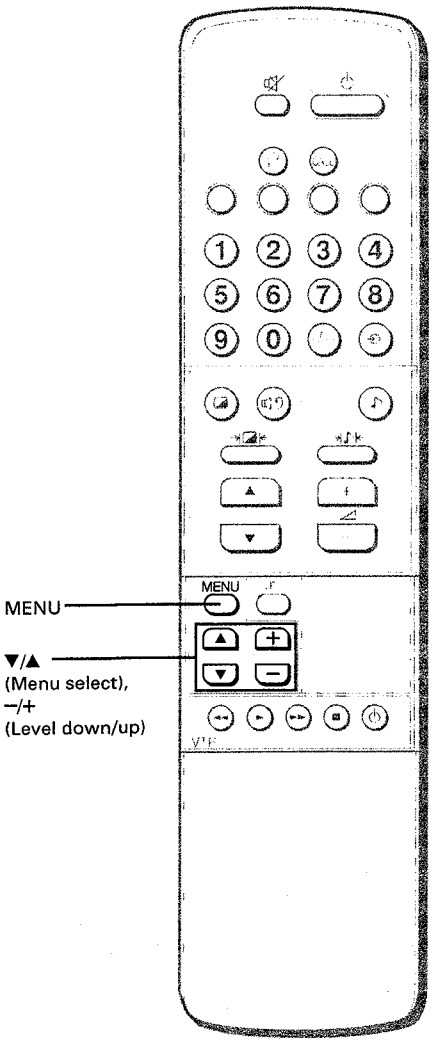
3 Press the ⏻ button to switch the TV to standby mode.
At the preset time, the TV will turn on automatically.

To cancel the ON timer

Push the main switch to turn off the TV or in step 2 above set the ON time and programme number to 00:00 P00.

Using Other Menus (continued)

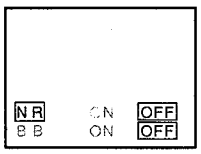
Picture noise reduction and blue background



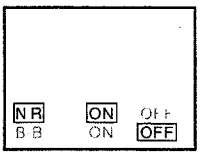
To reduce the picture noise

If the signal being received is weak and the picture is blurry, activate the noise reducer to improve the picture.

1 Press the MENU button repeatedly to display the menu on the right and press the menu select ▼ (or ▲) button to highlight NR (noise reducer).



2 Press the level down/up – (or +) button to highlight ON.



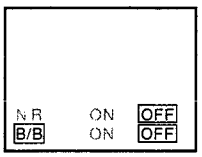
To turn off the noise reducer

Repeat steps 1 and 2 above and highlight NR OFF.

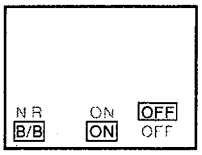
To turn the screen blue

With the blue background function ON, the TV will automatically turn blue when no signal is being received.

1 Press the MENU button repeatedly to display the menu on the right and press the menu select ▼ (or ▲) button to highlight B/B (blue background).



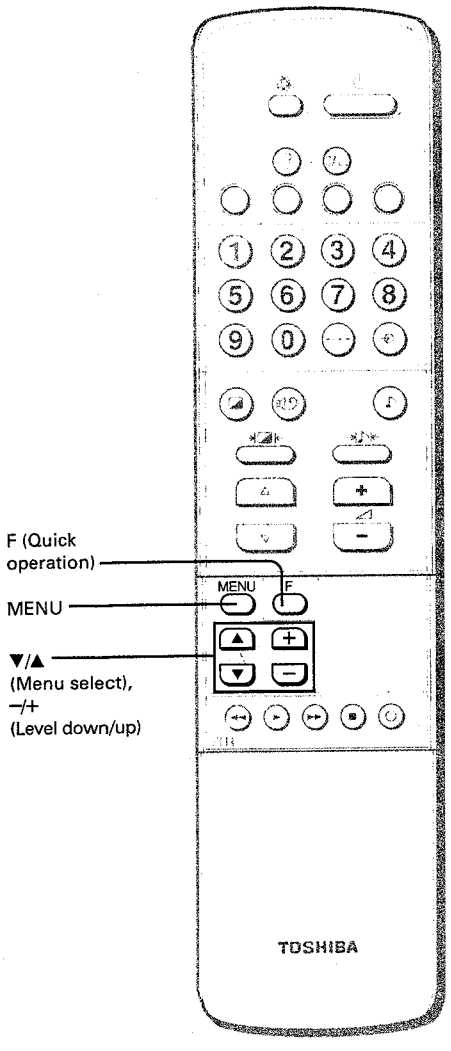
2 Press the level down/up – (or +) button to highlight ON.



To turn off the blue background

Repeat steps 1 and 2 above and highlight B/B OFF.

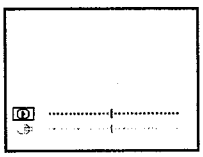
Picture sharpness/position controls



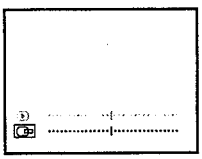
Note on the horizontal position adjustments
When you adjust the horizontal position, the vertical line may appear on the edge of the screen. In this case, readjust it until the line disappears.

To adjust the picture sharpness/position

1 Press the MENU button repeatedly to display the menu on the right.



2 Press the menu select ▼ (or ▲) button to highlight the desired item; press the level down/up −/+ button to adjust it.



Item		Pressing	
		−	+
	picture sharpness	softer	sharper
	horizontal position of the picture on the screen	move left	move right

The adjusted picture sharpness level is stored in the MEMORY (user-set) position of the selectable picture setting. (See page 16.)

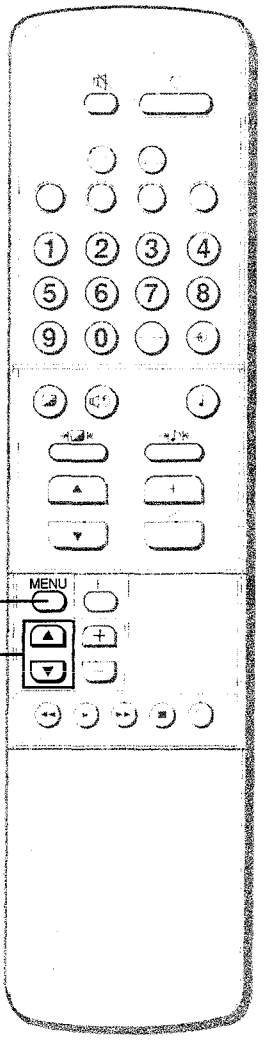
To change the control level rapidly

When you adjust the control level, press the F button and the level down or up button simultaneously. The control level changes rapidly.

Using Other Menus (continued)

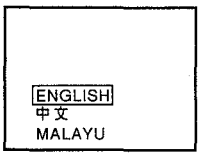
To select the language of the on-screen display (OSD)

Use this function to select the language for the OSD from among English, Mandarin and Malayan.

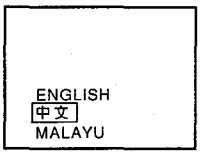


To select the language of the OSD

1 Press the MENU button repeatedly to display the *menu on the right.*

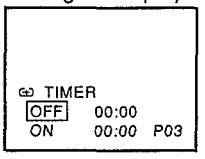


2 Press the menu select ▼/▲ buttons to highlight the desired language.

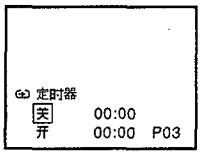


Note
The owner's manual is given with the OSD in English.

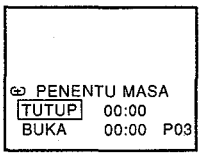
Ex. English display



Ex. Mandarin display



Ex. Malayan display



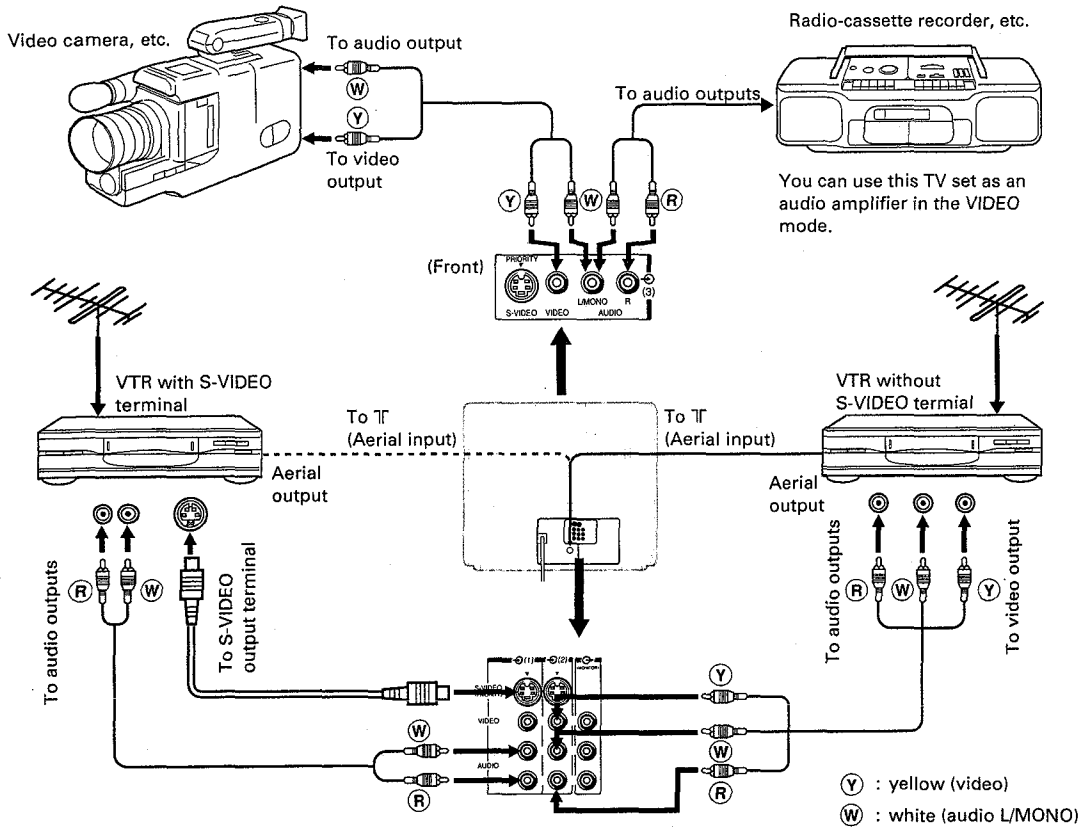
External Equipment Connections

- The following describes how to use and connect the TV with other AV equipment. Refer to the owner's manual of the equipment to be connected as well.

To connect video and audio equipment

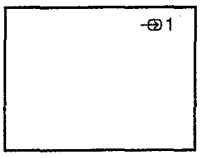
You can connect video equipments such as a VTR and video camera to this TV and enjoy the high quality picture.

If your video equipment has an S-VIDEO output aerial, connect it to the S-VIDEO input terminal (special S-VIDEO type) of the unit. If not, connect it to the video terminal (phono type).



To select the input

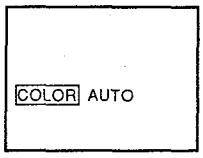
Press the ⊖ button on the TV set or the remote control repeatedly until you see the appropriate input indicator on the screen; ⊖ 1 (⊖ (1), video 1 input), ⊖ 2 (⊖ (2), video 2 input), ⊖ 3 (⊖ (3), video 3 input) and the programme number appear in sequence.



To return to aerial input, press the ⊖ button to display a TV picture with a programme number.

If the colour of video input is abnormal

The colour system setting may be incorrect. Press the MENU button repeatedly to display the menu on the right. Confirm that COLOR is set to AUTO. If not, select AUTO with level down/up buttons.



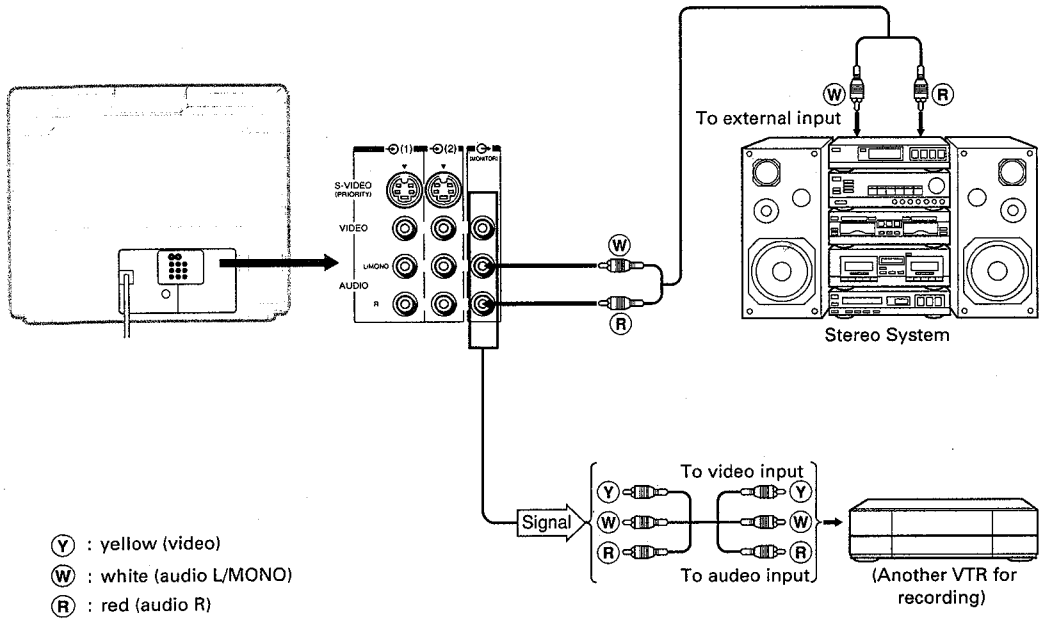
Note on the S-VIDEO terminal

The S-VIDEO input terminal has priority over the video 1, video 2 VIDEO terminals on the rear and the video 3 VIDEO terminal on the front. To use equipment connected to the video terminals, disconnect any plugs from the S-VIDEO terminal.

External Equipment Connections (continued)

To connect video and audio equipment (continued)

You can connect a stereo system to the MONITOR output terminals (phono type) on the TV to enjoy a high-quality sound from the stereo system. The MONITOR output terminals output the video and audio signals being monitored on the TV. The output audio signal level is fixed.



Ⓨ : yellow (video)
Ⓦ : white (audio L/MONO)
Ⓡ : red (audio R)

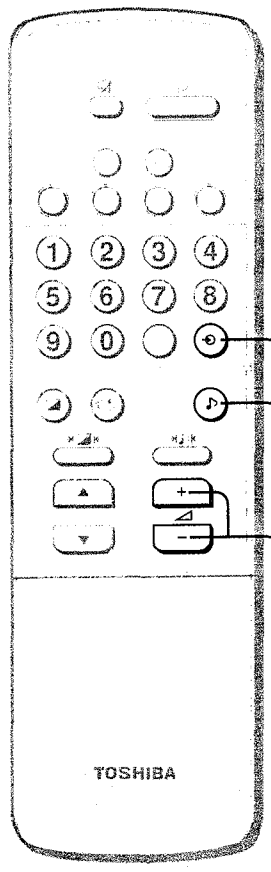
* Except for personal use, you are not allowed to use video or sound you have recorded without consent of the owner of copyright according to the Copyright Law.

Selecting the External Audio Input Channel

- When an external audio input is provided, you can select the input sound channel. This function is convenient when there are different sounds on the right and left channels of the external audio source.

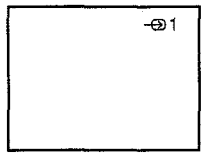
To select the external audio input channel

Connect the external audio source to the VIDEO 1, 2 or 3 inputs.

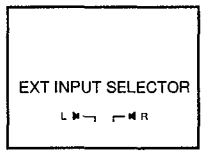


To select the external audio input channel

1 Press the ⊖ button to select the input.



2 Press the ♪ button repeatedly until you see the display on the right.



3 Press the – (or +) button to select the desired mode.

Display	Sound to be heard
L R	Stereo
R R	Right-channel sound from both speakers
L L	Left-channel sound from both speakers

A Guide to Simple Problem Solving

- Before calling service personnel, please check the following chart for a possible cause to the trouble you are experiencing.

Symptom	Check these things
Power is not turned on.	• Be sure the power cord is plugged in.
No sound	• Headphones may be plugged in.
Abnormal colour/sound	• Be sure the colour system and the sound system are correct. (Refer to the table below.)
Poor colour/tint	• May be the misadjustment for contrast, colour and tint.
Spots appear on the screen.	• May be jamming from cars, motorcycles, electric trains, high tension lines, neon signs, hair dryers, etc.
Lines appear on the screen.	• May be jamming from other TV receivers, personal computers, and TV games, as well as interference from radio station.
Double or triple images	• May be due to broadcast waves reflected from mountains or buildings. • Check if the direction of the aerial has changed because of strong wind, etc.
Snowy picture	• The aerial lead-in may be broken or disconnected. • Check if the direction of the aerial has changed.
Remote control does not work.	• The batteries in the remote control may be exhausted. • The batteries may be improperly installed.

The following are not failures

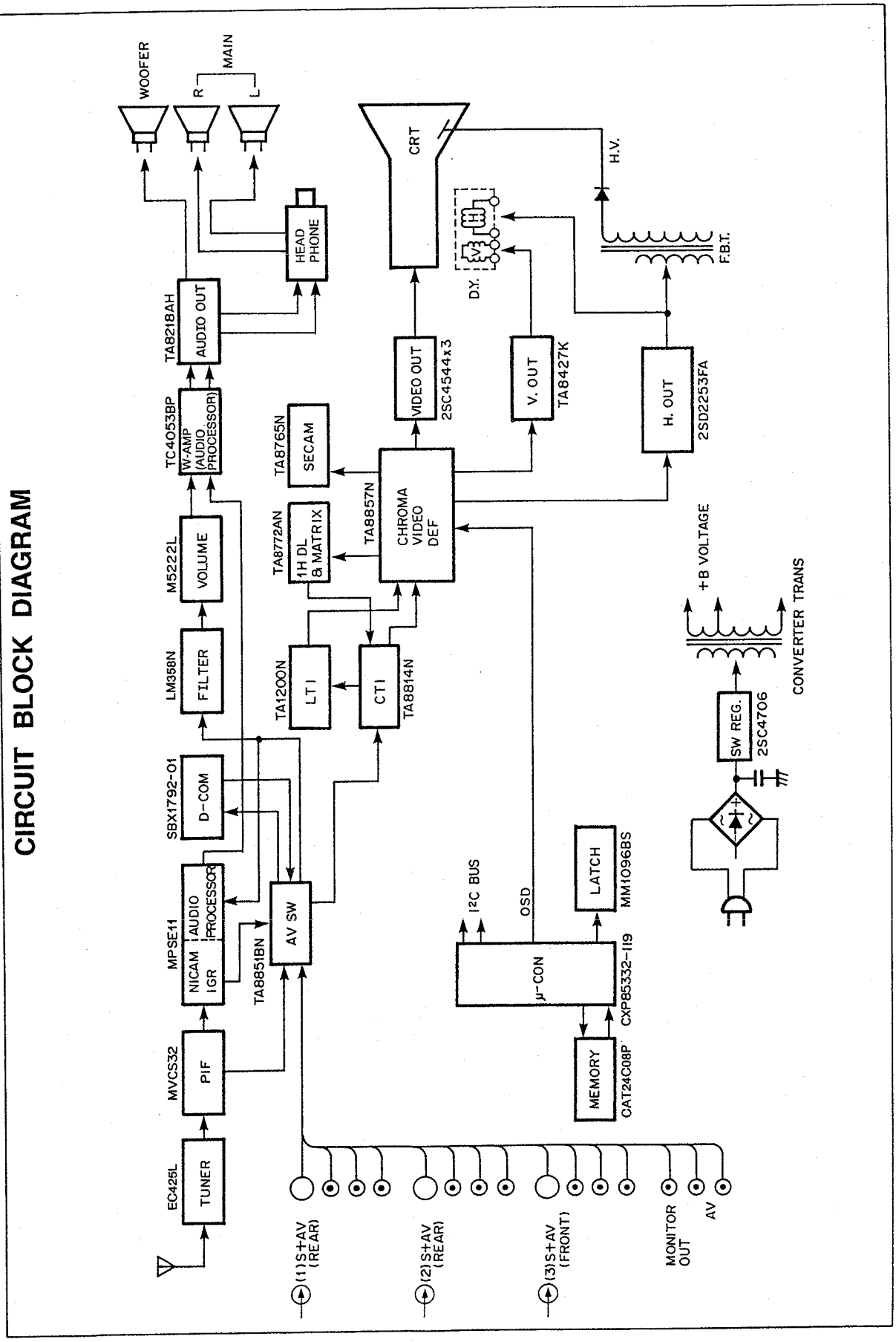
The cabinet clicks.	• The clicking is a creaking sound produced when the cabinet expands or contracts due to changes in the temperature. This will not affect the picture or sound.
Unevenness in colour sometimes develops in part of the screen.	• If the screen is set brightly, such unevenness in colour may occur depending upon the nature of the picture. The proper colour can be restored by reducing the contrast. Consult your local dealer.

Broadcast Transmission Systems in Each Country

Area	Country	System	
		Colour	Sound
Asia M. E.	Bahrain, Kuwait, Israel, Oman, Qatar, United Arab Emirates, Yemen, etc. Indonesia, Malaysia, Singapore, Thailand, etc.	PAL	B/G
	China, etc.	PAL	D/K
	Hong Kong	PAL	I
	Iraq, Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	SECAM	B/G
	Russian Federation, etc.	SECAM	D/K
	Myanmar, etc.	NTSC	M
Oceania	Australia, New Zealand, etc.	PAL	B/G
Africa	Republic of South Africa, etc.	PAL	I
South America	Argentina, Paraguay, Uruguay, etc.	PAL	N
	Brazil	PAL	M
	Chile, Colombia, etc.	NTSC	M

Note: "B/G" and "D/K" will be displayed as "BG" and "DK" on the screen.
PAL, SECAM and 358NTSC are different colour signal broadcast transmission systems applicable to different countries. 443NTSC is used in special VTRs to playback NTSC recorded video tapes through PAL television equipment.
[358NTSC = NTSC 3.58 MHz, 443NTSC = NTSC 4.43 MHz]

CIRCUIT BLOCK DIAGRAM



WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATIONS

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.
This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 220 volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least one hour in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 33.0 kV.
4. Adjust the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 33.0 kV under any conditions.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

CONVERGENCE ADJUSTMENTS

Note : Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 5.) and superimpose red and blue vertical lines in the centre area of the picture screen. (See figure 6.)
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure 6.)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 with understanding red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual affection and it makes dots movement complex.

Circumference Convergence Adjustment

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 4. temporalily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 6.) Push the mounted wedge into the space between picture tube and yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 6.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick 3 adhesive tapes on wedges.

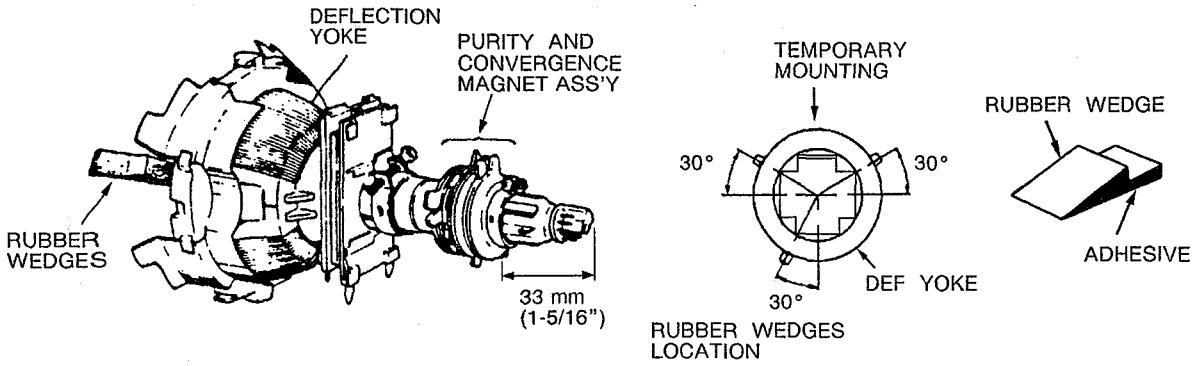
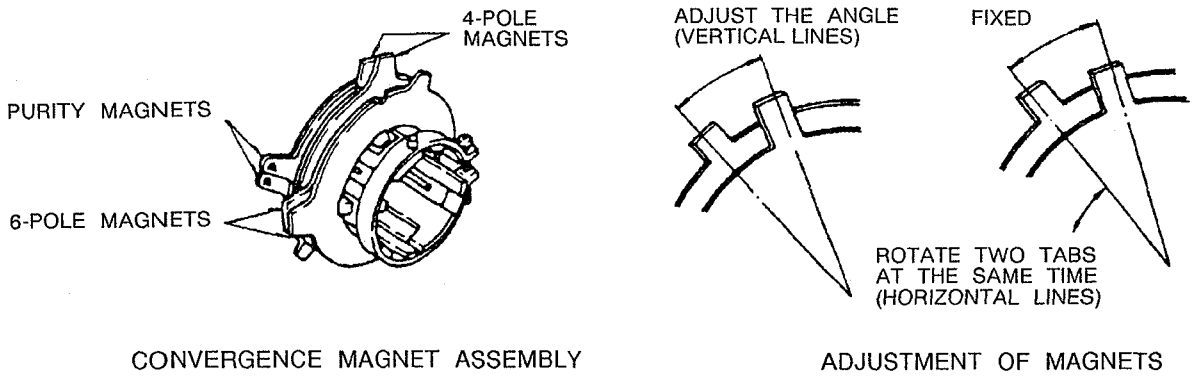


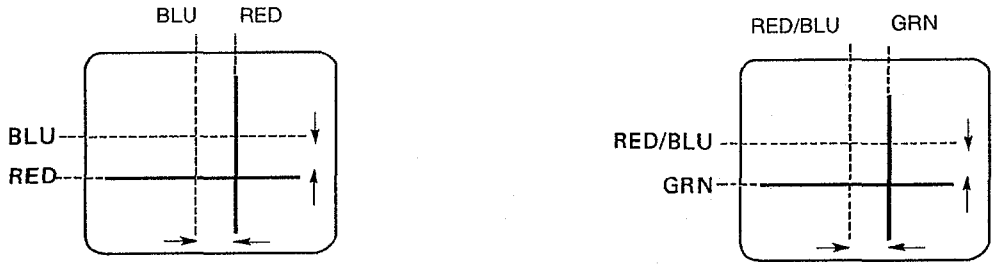
Figure 4.



CONVERGENCE MAGNET ASSEMBLY

ADJUSTMENT OF MAGNETS

Figure 5.



4-POLE MAGNETS MOVEMENT

6-POLE MAGNETS MOVEMENT

Center Convergence by Convergence Magnets

INCLINE THE YOKE UP (OR DOWN)

INCLINE THE YOKE RIGHT (OR LEFT)

Circumference Convergence by DEF Yoke

Figure 6. Dot Movement Pattern

ADJUSTMENT METHOD FOR SERVICING

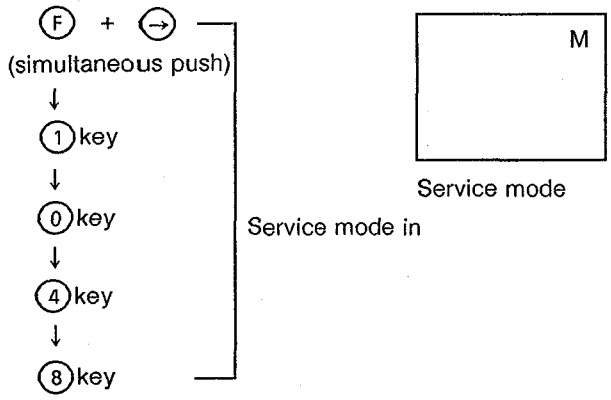
1. OUTLINE

Since each IC used is of I²C bus control type, readjustment of the TVs also needs adjustment through I²C bus control.

In the service mode, sub-bright, deflection system sub-adjustments, picture system sub-adjustments can be made easily with user remote control unit.

2. SERVICE MODE OPERATION

2-1. How to Enter the Service Mode



2-2. How to Exit from the Service Mode

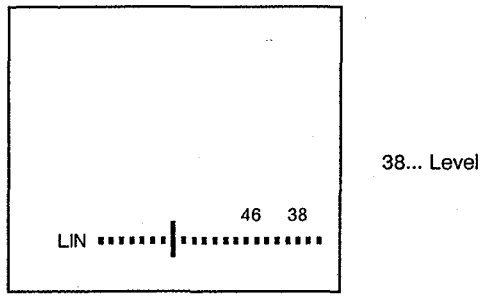
Exit the service mode by turning the power on/off with the remote control.

3. ADJUSTMENT IN THE SERVICE MODE

3-1. Service Mode Level Adjustments

(1) Push (F) + ◪ key (simultaneous push) (item UP) or (F) + ♪ key (simultaneous push) (item DN) to select item to be adjusted.

(2) Adjust with the level UP/DN (VOL UP/DN key) key.

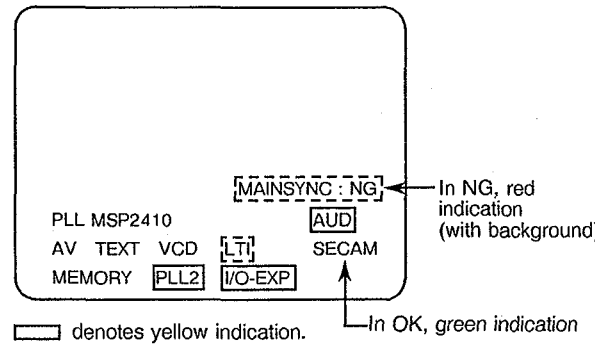


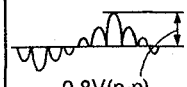
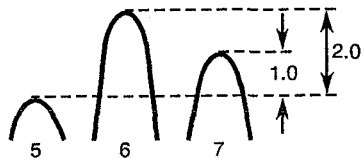
Example of screen display in level adjustment

3-2. Other Service Mode Adjustments

(F) + (4) key (simultaneous push)

Sync : OK/NG, Bus Line : OK/NG



Item No.	Symbol	Name	Setting	Input signal	Measure-ment point	Instru-ment	Adjustment procedure	Adjustment standard
21	SCT	SUB CONT	CONT: Cent Bright : Cent Color : Cent Tint : Cent	Sub bright signal	IC501 #44 (Monitor output)	Synchro-scope	1. Select the slave address 21 [SCT], and Y signal will be outputted from the monitor output. 2. Adjust the amplitude of the white level according to the Y signal and the pedestal level.	1.45V(p-p) ± 0.1V(p-p)
23	SUB	SUB BRIGHT	CONT: MAX Bright : Cent Color : MIN	Sub bright signal	Picture adjustment	Visual check	Adjust the number of black collapse of sub bright signal.	4 ± 1.5
25	CLC	COLOR Cont Cent	CONT: Cent Bright : Cent Color : Cent Tint : Cent	SECAM color bar signal	IC501 #44 (Monitor output)	Synchro-scope	1. Select the slave address 25 [CLC], and B-Y signal will be outputted from the monitor output. 2. Adjust the amplitude of the color bar output.	2.44V(p-p) ± 0.1V(p-p)
26	SCN	SUB COLOR NTSC	CONT: Cent Bright : Cent Color : Cent Tint : Cent	Sub bright signal	IC501 #44 (Monitor output)	Synchro-scope	1. This item must be adjusted after the slave addresses 28 [TCC] and 25 [CLC] have been adjusted. 2. Select the slave address 26 [SCN], and B-Y signal will be outputted from the monitor output. 3. Adjust the amplitude of the rainbow color bar output.	0.8V(p-p) ± 0.1V(p-p)  0.8V(p-p) ±0.1V(p-p)
27	SCP	SUB COLOR PAL	Non-adjustable type					
28	TCC	TINT CONT Cent	CONT: Cent Bright : Cent Color : Cent Tint : Cent	Sub bright signal	IC501 #44 (Monitor output)	Synchro-scope	1. Select the slave address 28 [TCC], and B-Y signal will be outputted from the monitor output. 2. Adjust the amplitude of the rainbow color bar output. (See figure below.)	-5° ± 5° (Refer to the conversion table.)
			Status of TCC 6.25					
38	TEB	TEXT BRIGHT	Non-adjustable type					
39	TEC	TEXT CONTRAST	Non-adjustable type					
40 41 42	RCUT GCUT BCUT	R-CUT OFF G-CUT OFF B-CUT OFF Screen VR	Set as follows: RCUT: 64 GCUT: 64 BCUT: 64 Select the horizontal level mode. F + 2		Picture adjustment	Visual check	1. Set as shown in the left column. 2. Increase the screen volume until either of the R, G or B line becomes bright. 3. Set the adjustment position of the screen VR here. 4. Increase the brightness of the other two lines gradually until they become bright. (Adjust the screen color to white.) * The mode becomes: F + 5: [RCUT] mode, F + 6: [GCUT] mode and F + 7: [BCUT] mode. 5. Release the service mode. F + 2	

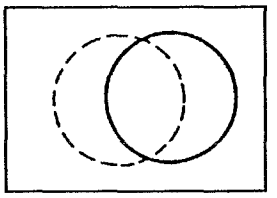
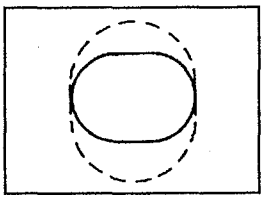
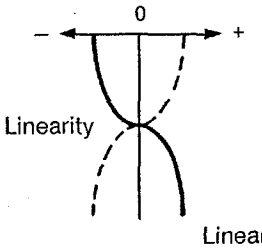
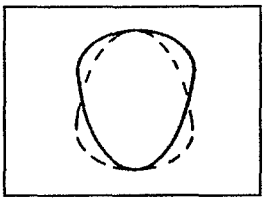
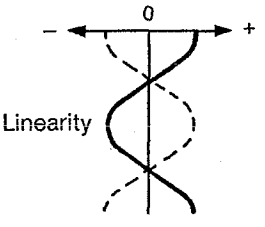
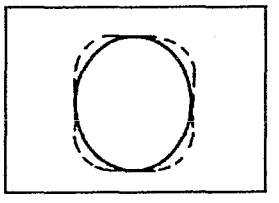
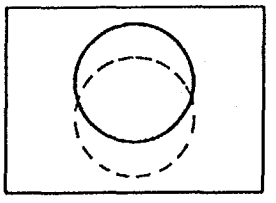
Item No.	Symbol	Name	Setting	Input signal	Measure-ment point	Instru-ment	Adjustment procedure	Adjustment standard
		White balance	Contrast: Adjust	Cross hatch, etc.	CRT	W/B checker	1. This item must be adjusted after the slave addresses 40 [RCUT], 41 [GCUT], 42 [BCUT] and the screen VR have been adjusted as described above. 2. Slave addresses 43 [GDRV] and 44 [BDRV] shall be set as shown in the left column. 3. Use a checker which adjusts brightness by changing the modulation factor.	HIGH LIGHT 103 cd/m² 11500k+ 0.0075 uv DARK 17 cd/m² 10500k+ 0.0105 uv
40	RCUT	R-CUT OFF	Bright: Adjust					
41	GCUT	G-CUT OFF	Color: MIN					
42	BCUT	B-CUT OFF						
43	GDRV	G-DRIVE	GDRV: 64					
44	BDRV	B-DRIVE	BDRV: 64					
69	BEL	BEL FILTER	—	SECAM color bar	ICM01 #21 (BELL monitor)	Synchro-scope	1. Select the slave address 69 [BEL], and the color signal will be outputted from the BELL monitor output. 2. Adjust BEL so that waveform on the synchroscope becomes flat.	±10%
70	SBY	SECAM B-Y black level	CONT: MAX Bright : Cent Color : Cent	SECAM color bar	IC501 #44	Synchro-scope	Adjust the level of the W-B signal to the H. BLK level.	±40mV
71	SRY	SECAM R-Y black level	CONT: MAX Bright : Cent Color : Cent	SECAM color bar	IC501 #44	Synchro-scope	Adjust the level of the W-B signal to the H. BLK level.	±40mV

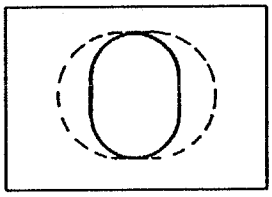
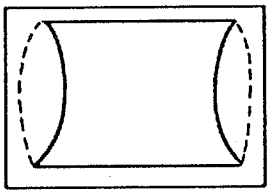
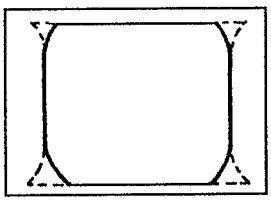
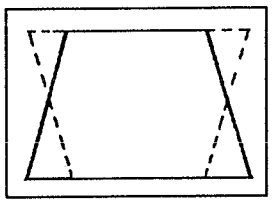
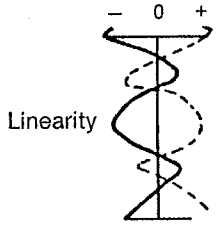
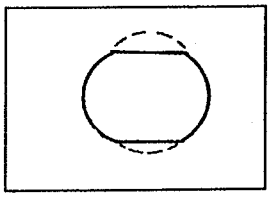
ADJUSTMENT PROCEDURE

Model name: F3SS (2939UE)

Adjustment parts or Bus control item	Input point/ Output point	Adjustment signal	Adjustment conditions and procedures
: Horizontal amplitude adjustment (WID) : Pin distortion compensation amount adjustment (DPC) : Keystone distortion compensation amount adjustment (KEY)	Visual check of picture (Bus control)	WG Philips pattern Do not use the Philips pattern of FRANCESE-CAM.	1. Conditions: After V. HEIGHT, VERT POSITION and H. CENT have been adjusted, set the controllers as follows: Contrast: MAX Brightness: Center Color: Center 2. Adjustment procedure a. Adjust the horizontal amplitude by the sub address WID. Adjust so that the left and right white flags of Philips pattern disappear at the very limits. b. Make the left and right vertical bars straight by the sub address DPC. c. Compensate the key distortion by the sub address KEY. d. Again, adjust the sub address WID.
: H. CENT (HPS)	Visual check of picture (Bus control)	WG Philips pattern Do not use the Philips pattern of FRANCESE-CAM.	1. Conditions: Contrast: MAX Brightness: Center Color: Center 2. Adjustment procedure Adjust the sub address HPS to the center of the screen. (Minimize D – C by the CRT adjustment magnetic field.) * Referential value: N magnetic field (Adjust to D – C = – 3.0 mm at BV = 35μT)
: HEIGHT (HIT) (Bus control) : VERT. POSITION (R350)	Visual check of picture	WG Philips pattern Do not use the Philips pattern of FRANCESE-CAM.	1. Conditions: Contrast: MAX Brightness: Center Color: Center 2. Adjustment procedure a. By R350, adjust V. Position to the center so that the vertical position of the circle of the Philips pattern comes to the center of the screen. b. Adjust HIT so that the upper and lower flags of Philips pattern disappear at the very limits.
V901	C. CRT adjustment magnetic field		Zero magnetic field (BV = 0μT)

5. SUB DATA ADDITIONAL DESCRIPTION

ITEM No.	Symbol	Description
45	HPS	H screen position correction. 
46	HIT	V amplitude adjustment. 
47	LIN	V linearity correction 1.   Linearity balance between top and bottom screen.
48	VSC	V linearity correction 2.   Linearity balance between top/bottom and center.
49	VPS	V picture position adjustment. 

ITEM No.	Symbol	Description
50	VCP	Setting of amount of V amplitude correction against variation of screen brightness.
51	WID	H amplitude adjustment. 
52	DPC	H pin-cushion distortion correction. 
53	CNR	H pin-cushion distortion correction at four corners. 
54	KEY	Pedestal distortion correction. 
55	HCP	Setting of amount of H amplitude correction against variation of screen brightness.
56	VMC	V linearity correction. Linearity balance at 1/4, 3/4 areas from top.  

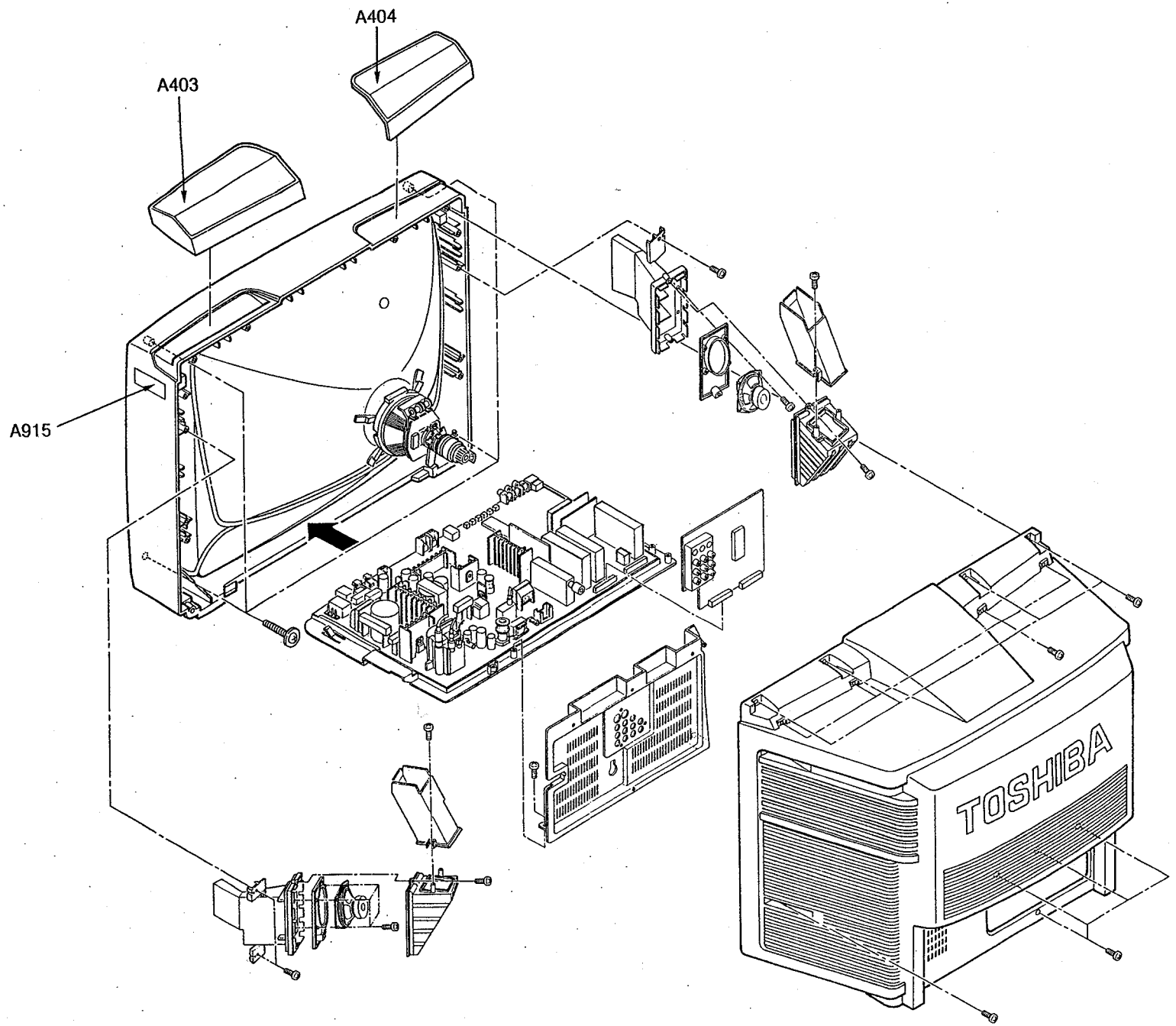
6. ROM DATA LIST FOR IIC BUS CONTROL

Item No.	Symbol	Comment	Data	Controlled IC or MODULE
16	M00	MODE 0	00	—
17	M01	MODE 1	48	—
18	M02	MODE 2	38	—
19	M03	MODE 3	17	—
20	UCC	UNICOLOR CONTROL CENTER	64	MULTI-COL (TA8857N)
21	SCT	*SUB CONTRAST	75	MULTI-COL (TA8857N)
22	SCW	SUB CONTRAST WIDE (16:9)	64	MULTI-COL (TA8857N)
23	SUB	*SUB BRIGHT	128	MULTI-COL (TA8857N)
24	BCW	BRIGHT CONTROL WIDTH	50	MULTI-COL (TA8857N)
25	CLC	*COLOR CENTER	64	MULTI-COL (TA8857N)
26	SCN	*SUB COLOR NTSC	80	MULTI-COL (TA8857N)
27	SCP	SUB COLOR PAL	58	MULTI-COL (TA8857N)
28	TCC	*TINT CONTROL CENTER	95	MULTI-COL (TA8857N)
29	TCW	TINT CONTROL WIDTH	84	MULTI-COL (TA8857N)
30	SS4	SUB SHARP 4.43	64	PICTURE-ENHA. (TA1200N)
31	SS3	SUB SHARP 3.58	64	PICTURE-ENHA. (TA1200N)
32	MX4	SHARP MAX 4.43	127	PICTURE-ENHA. (TA1200N)
33	MI4	SHARP MIN 4.43	0	PICTURE-ENHA. (TA1200N)
34	MX3	SHARP MAX 3.58	127	PICTURE-ENHA. (TA1200N)
35	MI3	SHARP MIN 3.58	0	PICTURE-ENHA. (TA1200N)
36	SV4	SUB SHARP 4.43 (VIDEO)	64	PICTURE-ENHA. (TA1200N)
37	SV3	SUB SHARP 3.58 (VIDEO)	64	PICTURE-ENHA. (TA1200N)
38	TEB	TEXT BRIGHT	59	MULTI-COL (TA8857N)
39	TEC	TEXT CONTRAST	45	MULTI-COL (TA8857N)
40	RCUT	*R-CUT OFF	64	MULTI-COL (TA8857N)
41	GCUT	*G-CUT OFF	64	MULTI-COL (TA8857N)
42	BCUT	*B-CUT OFF	64	MULTI-COL (TA8857N)
43	GDRV	*G-DRIVE	64	MULTI-COL (TA8857N)
44	BDRV	*B-DRIVE	64	MULTI-COL (TA8857N)
45	HPS	*H-POSITION	70	MULTI-COL (TA8857N)
46	HIT	*HEIGHT	60	MULTI-COL (TA8857N)
47	LIN	*V. LINEARITY	64	MULTI-COL (TA8857N)
48	VSC	V.S-CORRECTION	64	MULTI-COL (TA8857N)

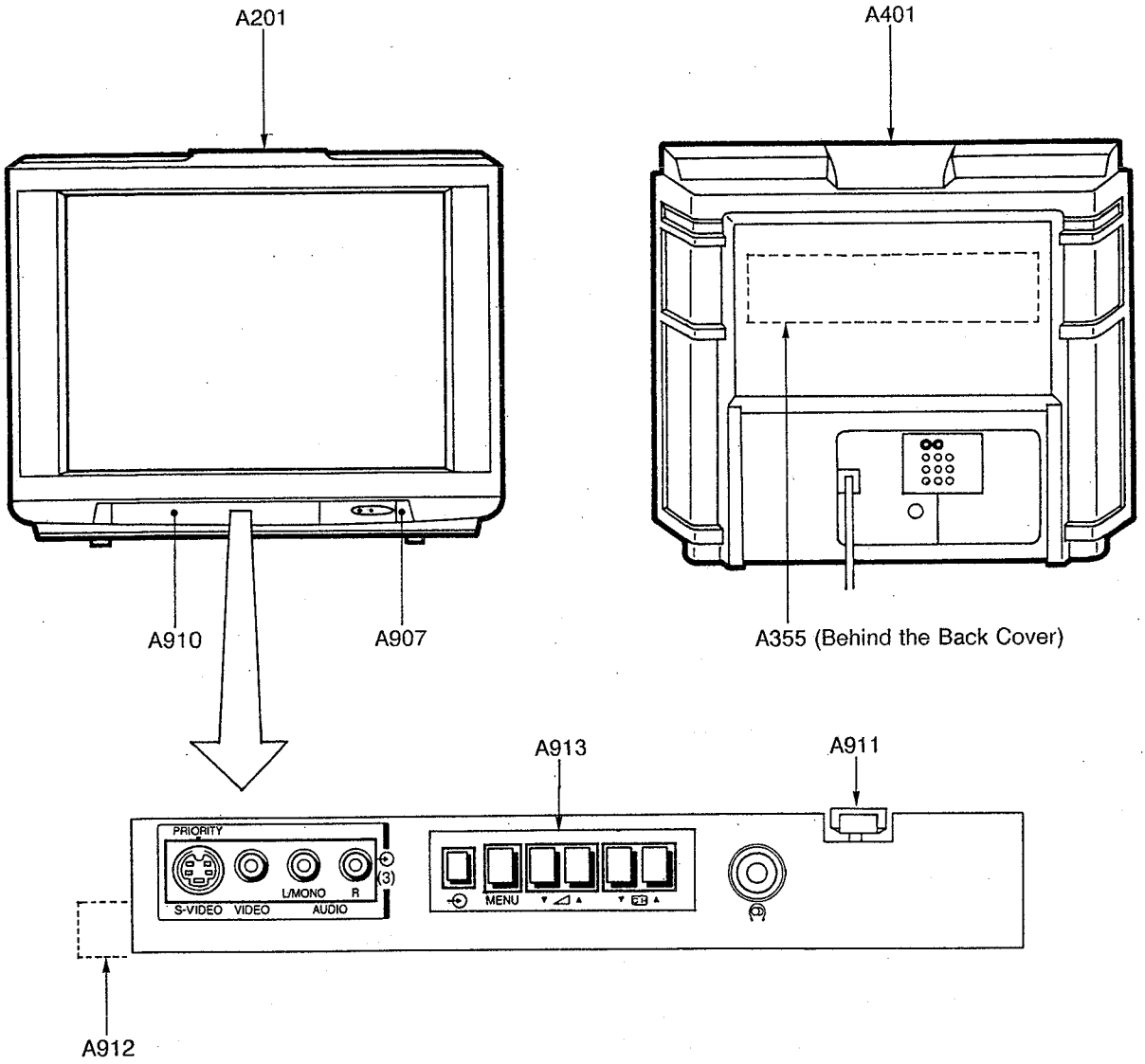
* Mark items should be adjusted.

Item No.	Symbol	Comment	Data	Controlled IC or MODULE
49	VPS	V. POSITION (for NTSC SIGNAL ONLY)	16	MULTI-COL (TA8857N)
50	VCP	V. COMPENSATION	96	MULTI-COL (TA8857N)
51	WID	*H. WIDTH	36	MULTI-COL (TA8857N)
52	DPC	*DPC	56	MULTI-COL (TA8857N)
53	CNR	DPC CORNER	40	MULTI-COL (TA8857N)
54	KEY	*KEYSTONE	38	MULTI-COL (TA8857N)
55	HCP	H. COMPENSATION	00	MULTI-COL (TA8857N)
56	VMC	V. "S"-CORRECTION	63	MULTI-COL (TA8857N)
57	VDC	VDC	63	MULTI-COL (TA8857N)
58	VM0	VIDEO MODE 0	156	AV SELECTOR (TA8851BN)
59	VM1	VIDEO MODE 1	47	AV SELECTOR (TA8851BN)
60	NON	NICAM ON	05	IGR & NICAM MODUL (MPSE11)
61	NOF	NICAM OFF	16	IGR & NICAM MODUL (MPSE11)
62	ION	IGR ON	16	IGR & NICAM MODUL (MPSE11)
63	IOF	IGR OFF	08	IGR & NICAM MODUL (MPSE11)
64	I24	IGR K24 (INPUT SELECT DAC1 FM)	80	IGR & NICAM MODUL (MPSE11)
65	I39	IGR K39 (DAC2 VOL5 ANALOG)	12	IGR & NICAM MODUL (MPSE11)
66	N39	NICAM K39 (DAC2 VOL5 ANALOG)	13	IGR & NICAM MODUL (MPSE11)
67	I49	IGR K14, 19 (DEMATRIX MAIN, AUX)	32	IGR & NICAM MODUL (MPSE11)
68	K23	INPUT LEVEL K23 (INPUT SELECT DAC1 PDM)	95	IGR & NICAM MODUL (MPSE11)
69	BEL	*BELL ADJ	128	SECAM (TA8765N)
70	SBY	*SECAM B-Y	64	SECAM (TA8765N)
71	SRY	*SECAM R-Y	64	SECAM (TA8765N)
72	SECD	SECAM MODE	78	SECAM (TA8765N)
73	YNR	Y-NR	0	PICTURE-ENHA. (TA1200N)
74	LT1	LTI MODE 1	255	PICTURE-ENHA. (TA1200N)
75	LT2	LTI MODE 2	3	PICTURE-ENHA. (TA1200N)
76	FAP	F-APACON PEAK	0	PICTURE-ENHA. (TA1200N)
77	FRT	F-RESPONSE TRANSIENT	127	PICTURE-ENHA. (TA1200N)
78	PHP	PIP H POSITION	04	—
79	KSB	*SUB PICTURE SUB BRIGHT	64	—

* Mark items should be adjusted.


A404
A403
A915
TOSHIBA

CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201	23410539	Front Cover
A355	23351080	Speaker, SPK-1352, 100x100mm, 6 ohm
⚠A401	23426335	Back Cover
A403	23426324	Top Cover (R)
A404	23426325	Top Cover (L)
A508	23035010	Screw, PBI 4x16
A509	23035010	Screw, PBI 4x16
A907	23443942	Knob, POWER
A910	23426337	Door
A911	23451552	NS Push Catch
A912	23451603	Damper
A913	23443807	Knob, key
A915	23436536	Handhold

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols " ⚠ " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

ABBREVIATIONS:

Capacitors.....	CD	: Ceramic Disk	PF	: Plastic Film	EL	: Electrolytic
Resistors.....	CF	: Carbon Film	CC	: Carbon Composition	MF	: Metal Film
	OMF	: Oxide Metal Film	VR	: Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C100	24538474	PF, 0.47μF
C101	24794101	EL, 100μF, ±20%, 16V
C102	24590102	PF, 1000pF
C103	24590102	PF, 1000pF
C180	24797100	EL, 10μF, ±20%, 50V
C182	24232103	CD, 0.01μF, +80%, −20%
C183	24797229	EL, 2.2μF, ±20%, 50V
C184	24797229	EL, 2.2μF, ±20%, 50V
C185	24232103	CD, 0.01μF, +80%, −20%
C187	24232103	CD, 0.01μF, +80%, −20%
C188	24232103	CD, 0.01μF, +80%, −20%
C189	24797100	EL, 10μF, ±20%, 50V
C200	24538104	PF, 0.1μF
C201	24538104	PF, 0.1μF
C202	24794101	EL, 100μF, ±20%, 16V
C240	24538474	PF, 0.47μF
C250	24473180	CD, 18pF
C251	24473100	CD, 10pF
C252	24232103	CD, 0.01μF, +80%, −20%
C253	24473470	CD, 47pF
C254	24232103	CD, 0.01μF, +80%, −20%
C255	24473100	CD, 10pF
C257	24473150	CD, 15pF
C258	24473330	CD, 33pF
C260	24436150	CD, 15pF
C261	24436180	CD, 18pF
C303	24214221	CD, 220pF, ±10%, 500V
C305	24617915	EL, 1μF, ±10%, 50V
C306	24630798	EL, 3300μF, ±10%, 25kV
C307	24693473	PF, 0.047μF, 100V
C308	24668221	EL, 220μF, ±20%, 35V
C310	24765222	EL, 2200μF, ±20%, 35V
C311	24214151	CD, 150pF, ±10%, 500V
C312	24590102	PF, 1000pF
C313	24082057	PF, 0.22μF, 100V
C314	24590563	PF, 0.056μF
C315	24538104	PF, 0.1μF
C316(U002)	24538104	PF, 0.1μF
C316(U101)	24232103	CD, 0.01μF, +80%, −20%
C317	24617926	EL, 220μF, ±20%, 16V

Location No.	Part No.	Description
C318	24794101	EL, 100μF, ±20%, 16V
C319	24212102	CD, 1000pF, ±10%
C320	24668101	EL, 100μF, ±20%, 35V
C322	24617912	EL, 2.2μF, ±10%, 50V
C323	24538104	PF, 0.1μF
C325	24538394	PF, 0.39μF
C344	24206229	EL, 2.2μF, 50V
C378	24538224	PF, 0.22μF
C400	24082362	PF, 1000pF, ±10%, 15kV
C401	24794101	EL, 100μF, ±20%, 16V
C402(U101)	24232103	CD, 0.01μF, +80%, −20%
C402(U002)	24092336	CD, 180pF, ±10%, 2kV
C403	24794331	EL, 330μF, ±20%, 16V
C410	24082261	PF, 5600pF, 100V
C412	24590123	PF, 0.012μF
C413(U002)	24214391	CD, 390pF, ±10%, 500V
C413(U101)	24590822	PF, 8200pF
C414	24206010	EL, 1μF, 50V
C416	24790100	EL, 10μF, ±20%, 160V
C417	24214821	CD, 820pF, ±10%, 500V
C421	24538104	PF, 0.1μF
C427	24474331	CD, 330pF, ±10%
C430	24232103	CD, 0.01μF, +80%, −20%
C438	24538474	PF, 0.47μF
C439	24095887	PF, 0.01μF, ±3%, 630V
⚠C440	24082251	PF, 8000pF, ±3%, 1500kV
C441	24214221	CD, 220pF, ±10%, 500V
⚠C442	24095787	PF, 0.3μF, 400V
C443	24214221	CD, 220pF, ±10%, 500V
C444	24082288	PF, 5600pF, ±3%, 1800V
C445	24828563	PF, 0.056μF, 200V
C446	24095741	PF, 0.039μF, 400V
C447	24679330	EL, 33μF, ±20%, 250V
C448	24640908	EL, 33μF, ±20%, 160V
C449	24667102	EL, 1000μF, ±20%, 25V
C450	24794471	EL, 470μF, ±20%, 16V
⚠C463	24212222	CD, 2200pF, ±10%
C466	24095751	PF, 0.33μF, 200V
C470	24794220	EL, 22μF, ±20%, 16V
C471	24538474	PF, 0.47μF
C480	24797478	EL, 0.47μF, ±20%, 50V

Location No.	Part No.	Description
C490	24794100	EL, 10μF, ±20%, 16V
C491	24763101	EL, 100μF, ±20%, 16V
C509	24590333	PF, 0.033μF
C510	24538104	PF, 0.1μF
C511	24538104	PF, 0.1μF
C512	24538104	PF, 0.1μF
C513	24591473	PF, 0.047μF
C515	24232103	CD, 0.01μF, +80%, −20%
C517	24763471	EL, 470μF, ±20%, 16V
C518	24591473	PF, 0.047μF
C520	24212102	CD, 1000pF, ±10%
C521	24538104	PF, 0.1μF
C522	24473470	CD, 47pF
C524	24212102	CD, 1000pF, ±10%
C525	24436080	CD, 8pF, ±0.25pF
C526	24436080	CD, 8pF, ±0.25pF
C527	24436080	CD, 8pF, ±0.25pF
C528	24797010	EL, 1μF, ±20%, 50V
C529	24590112	PF, 1100pF
C530	24232103	CD, 0.01μF, +80%, −20%
C531	24794101	EL, 100μF, ±20%, 16V
C533	24353120	CD, 12pF
C534	24590103	PF, 0.01μF
C535	24353120	CD, 12pF
C536	24590103	PF, 0.01μF
C537	24203100	EL, 10μF, ±20%, 16V
C538	24590333	PF, 0.033μF
C539	24590333	PF, 0.033μF
C540	24232103	CD, 0.01μF, +80%, −20%
C541	24232103	CD, 0.01μF, +80%, −20%
C542	24538474	PF, 0.47μF
C543	24794100	EL, 10μF, ±20%, 16V
C544	24206220	EL, 22μF, 50V
C545	24590103	PF, 0.01μF
C546	24538104	PF, 0.1μF
C547	24794470	EL, 47μF, ±20%, 16V
C548	24232103	CD, 0.01μF, +80%, −20%
C549	24538104	PF, 0.1μF
C550	24538104	PF, 0.1μF
C551	24797100	EL, 10μF, ±20%, 50V
C552	24538104	PF, 0.1μF
C553	24538104	PF, 0.1μF
C554	24797478	EL, 0.47μF, ±20%, 50V
C555	24794101	EL, 100μF, ±20%, 16V
C556	24232103	CD, 0.01μF, +80%, −20%
C557	24797478	EL, 0.47μF, ±20%, 50V
C558	24590103	PF, 0.01μF
C559	24538104	PF, 0.1μF
C560	24538104	PF, 0.1μF
C561	24206478	EL, 0.47μF, 50V
C562	24206478	EL, 0.47μF, 50V
C563	24797010	EL, 1μF, ±20%, 50V
C565	24797010	EL, 1μF, ±20%, 50V
C566	24797010	EL, 1μF, ±20%, 50V
C571	24590222	PF, 2200pF
C572	24766471	EL, 470μF, ±20%, 50V
C575	24232103	CD, 0.01μF, +80%, −20%
C630	24203100	EL, 10μF, ±20%, 16V
C631	24203100	EL, 10μF, ±20%, 16V
C640	24539334	PF, 0.33μF
C641	24590392	PF, 3900pF
C642	24203470	EL, 47μF, ±20%, 16V
C643	24203470	EL, 47μF, ±20%, 16V
C644	24203220	EL, 22μF, ±20%, 16V

Location No.	Part No.	Description
C645	24085988	EL, 1μF, ±20%, 50V, Non-Polar
C646	24203220	EL, 22μF, ±20%, 16V
C647	24814103	Chip, 0.01μF, +80%, −20%
C648	24206229	EL, 2.2μF, 50V
C649	24203100	EL, 10μF, ±20%, 16V
C650	24763471	EL, 470μF, ±20%, 16V
C651	24774470	Chip, 47pF, CH
C652	24590823	PF, 0.082μF
C670	24538104	PF, 0.1μF
C671	24797010	EL, 1μF, ±20%, 50V
C672	24794470	EL, 47μF, ±20%, 16V
C673	24797010	EL, 1μF, ±20%, 50V
C674	24590102	PF, 1000pF
C675	24797010	EL, 1μF, ±20%, 50V
C676	24538104	PF, 0.1μF
C677	24590102	PF, 1000pF
C678	24795470	EL, 47μF, ±20%, 25V
C679	24797010	EL, 1μF, ±20%, 50V
C680	24795470	EL, 47μF, ±20%, 25V
C681	24795470	EL, 47μF, ±20%, 25V
C682	24796471	EL, 470μF, ±20%, 35V
C683	24796471	EL, 470μF, ±20%, 35V
C684	24538124	PF, 0.12μF
C685	24668102	EL, 1000μF, ±20%, 35V
C686	24538124	PF, 0.12μF
C687	24796471	EL, 470μF, ±20%, 35V
C688	24538124	PF, 0.12μF
C691	24797010	EL, 1μF, ±20%, 50V
C692	24797010	EL, 1μF, ±20%, 50V
C695	24794102	EL, 1000μF, ±20%, 16V
C701	24203470	EL, 47μF, ±20%, 16V
C702	24203101	EL, 100μF, ±20%, 16V
C703	24436820	CD, 82pF
C704	24590822	PF, 8200pF
C705	24212103	CD, 0.01μF, ±10%
C707	24794470	EL, 47μF, ±20%, 16V
C708	24212103	CD, 0.01μF, ±10%
C710	24203100	EL, 10μF, ±20%, 16V
C712	24666470	EL, 47μF, ±20%, 16V
C713	24790100	EL, 10μF, ±20%, 160V
C714	24436101	CD, 100pF
C715	24214472	CD, 4700pF, ±10%, 500V
C716	24436101	CD, 100pF
C717	24214472	CD, 4700pF, ±10%, 500V
C718	24790470	EL, 47μF, ±20%, 160V
C719	24435560	CD, 56pF, 500V
C720	24790100	EL, 10μF, ±20%, 160V
C721	24790470	EL, 47μF, ±20%, 160V
C722	24436561	CD, 560pF
C723	24212102	CD, 1000pF, ±10%
C724	24436121	CD, 120pF
C725	24436101	CD, 100pF
C726	24212102	CD, 1000pF, ±10%
⚠C801	24082374	PF, 0.22μF, AC250V
⚠C804	24082374	PF, 0.22μF, AC250V
C805	24092281	CD, 4700pF, ±20%, AC250V
C806	24092281	CD, 4700pF, ±20%, AC250V
C807	24092281	CD, 4700pF, ±20%, AC250V
C808	24092281	CD, 4700pF, ±20%, AC250V
C809	24086934	EL, 560μF, ±20%, 450V
C819	24794470	EL, 47μF, ±20%, 16V
C820	24590822	PF, 8200pF
C821	24794102	EL, 1000μF, ±20%, 16V

Location No.	Part No.	Description
C822	24095634	PF, 0.01μF, ±3%, 630V
C823	24092343	CD, 680pF, ±10%, 2kV
C824	24095937	PF, 1200pF, 1250V
C825	24212151	CD, 150pF, ±10%
C826	24795471	EL, 470μF, ±20%, 25V
C827	24799102	EL, 1000μF, ±20%, 63V
C829	24092339	CD, 330pF, ±10%, 2kV
C830	24092337	CD, 220pF, ±10%, 2kV
C831	24086939	EL, 330μF, ±20%, 200V
C833	24436030	CD, 3pF, ±0.25pF
C834	24590102	PF, 1000pF
C835	24797479	EL, 4.7μF, ±20%, 50V
C836	24797100	EL, 10μF, ±20%, 50V
C837	24797100	EL, 10μF, ±20%, 50V
C838	24214471	CD, 470pF, ±10%, 500V
C841	24435390	CD, 39pF, 500V
C842	24435390	CD, 39pF, 500V
C843	24797100	EL, 10μF, ±20%, 50V
⚠C844	24094656	CD, 2200pF, ±20%, AC400V
C845	24794471	EL, 470μF, ±20%, 16V
C846	24693563	PF, 0.056μF, 100V
C847	24538563	PF, 0.056μF
C849	24214471	CD, 470pF, ±10%, 500V
C850	24214561	CD, 560pF, ±10%, 500V
C851	24214561	CD, 560pF, ±10%, 500V
C852	24214182	CD, 1800pF, ±10%, 500V
⚠C853	24094654	CD, 470pF, ±20%, AC400V
C854	24666222	EL, 2200μF, ±20%, 16V
C855	24212331	CD, 330pF, ±10%
C856	24436301	CD, 300pF
C859	24214471	CD, 470pF, ±10%, 500V
C860	24668222	EL, 2200μF, ±20%, 35V
C861	24232103	CD, 0.01μF, +80%, −20%
C862	24797100	EL, 10μF, ±20%, 50V
C863	24794470	EL, 47μF, ±20%, 16V
C864	24794470	EL, 47μF, ±20%, 16V
C902	24092353	CD, 4700pF, ±10%, 2kV
C904	24436391	CD, 390pF
C905	24436391	CD, 390pF
C907	24436391	CD, 390pF
C909	24679220	EL, 22μF, ±20%, 250V
C910	24797478	EL, 0.47μF, ±20%, 50V
C911	24203100	EL, 10μF, ±20%, 16V
C912	24763102	EL, 1000μF, ±20%, 16V
C913	24203100	EL, 10μF, ±20%, 16V
C914	24212103	CD, 0.01μF, ±10%
C930	24214101	CD, 100pF, ±10%, 500V
C932	24214101	CD, 100pF, ±10%, 500V
CA01	24232103	CD, 0.01μF, +80%, −20%
CA10	24212102	CD, 1000pF, ±10%
CA11	24794100	EL, 10μF, ±20%, 16V
CA12	24794471	EL, 470μF, ±20%, 16V
CA13	24794100	EL, 10μF, ±20%, 16V
CA15	24538104	PF, 0.1μF
CA16	24794100	EL, 10μF, ±20%, 16V
CA17	24538104	PF, 0.1μF
CA29	24538474	PF, 0.47μF
CA31	24473300	CD, 30pF
CA32	24473300	CD, 30pF
CA36	24538104	PF, 0.1μF
CA47	24436470	CD, 47pF
CA48	24474101	CD, 100pF, ±10%
CA49	24436470	CD, 47pF
CA70	24797010	EL, 1μF, ±20%, 50V

Location No.	Part No.	Description
CA71	24212102	CD, 1000pF, ±10%
CA72	24590472	PF, 4700pF
CA75	24436561	CD, 560pF
CA76	24794330	EL, 33μF, ±20%, 16V
CA77	24232103	CD, 0.01μF, +80%, −20%
CA90	24212102	CD, 1000pF, ±10%
CA91	24212102	CD, 1000pF, ±10%
CB01	24474101	CD, 100pF, ±10%
CB02	24795470	EL, 47μF, ±20%, 25V
CB04	24232103	CD, 0.01μF, +80%, −20%
CD01	24796220	EL, 22μF, ±20%, 35V
CD02	24095883	PF, 0.015μF, ±3%, 630V
CD11	24640872	EL, 10μF, ±20%, 100V
CL01	24797229	EL, 2.2μF, ±20%, 50V
CL02	24538104	PF, 0.1μF
CL03	24473330	CD, 33pF
CL04	24232103	CD, 0.01μF, +80%, −20%
CL05	24206228	EL, 0.22μF, 50V
CL06	24797229	EL, 2.2μF, ±20%, 50V
CL07	24436101	CD, 100pF
CL08	24797100	EL, 10μF, ±20%, 50V
CL09	24232103	CD, 0.01μF, +80%, −20%
CL10	24794101	EL, 100μF, ±20%, 16V
CL12	24206228	EL, 0.22μF, 50V
CL13	24473200	CD, 20pF
CL15	24206339	EL, 3.3μF, 50V
CM01	24474910	CD, 91pF, ±10%
CM02	24436910	CD, 91pF
CM03	24797220	EL, 22μF, ±20%, 50V
CM04	24232103	CD, 0.01μF, +80%, −20%
CM06	24436150	CD, 15pF
CM07	24206010	EL, 1μF, 50V
CM08	24474102	CD, 1000pF, ±10%
CM09	24797100	EL, 10μF, ±20%, 50V
CM10	24590563	PF, 0.056μF
CM11	24590203	PF, 0.02μF
CM12	24590683	PF, 0.068μF
CM13	24206229	EL, 2.2μF, 50V
CM14	24206229	EL, 2.2μF, 50V
CM15	24590223	PF, 0.022μF
CM16	24436910	CD, 91pF
CM17	24206010	EL, 1μF, 50V
CM18	24232103	CD, 0.01μF, +80%, −20%
CM19	24436820	CD, 82pF
CM20	24474102	CD, 1000pF, ±10%
CM21	24474820	CD, 82pF, ±10%
CN96	24538104	PF, 0.1μF
CS50	24797229	EL, 2.2μF, ±20%, 50V
CS78	24794101	EL, 100μF, ±20%, 16V
CS79	24538104	PF, 0.1μF
CS80	24590473	PF, 0.047μF
CS81	24538104	PF, 0.1μF
CS82	24590473	PF, 0.047μF
CS83	24085960	EL, 4.7μF, ±20%, 50V, Non-Polar
CS84	24085960	EL, 4.7μF, ±20%, 50V, Non-Polar
CT01	24538104	PF, 0.1μF
CT02	24232103	CD, 0.01μF, +80%, −20%
CT03	24590333	PF, 0.033μF
CT04	24590333	PF, 0.033μF
CT05	24538104	PF, 0.1μF
CT13	24473200	CD, 20pF
CT14	24474101	CD, 100pF, ±10%

Location No.	Part No.	Description
CV01(U003)	24538104	PF, 0.1μF
CV01(U101)	24474102	CD, 1000pF, ±10%
CV02	24814103	Chip, 0.01μF, +80%, −20%
CV04	24794100	EL, 10μF, ±20%, 16V
CV05	24814103	Chip, 0.01μF, +80%, −20%
CV06	24203100	EL, 10μF, ±20%, 16V
CV07	24203100	EL, 10μF, ±20%, 16V
CV08	24203100	EL, 10μF, ±20%, 16V
CV09	24203100	EL, 10μF, ±20%, 16V
CV10	24203100	EL, 10μF, ±20%, 16V
CV11	24203100	EL, 10μF, ±20%, 16V
CV12	24203100	EL, 10μF, ±20%, 16V
CV13	24815102	Chip, 1000pF, ±10%, B
CV14	24815102	Chip, 1000pF, ±10%, B
CV15	24203100	EL, 10μF, ±20%, 16V
CV16	24203100	EL, 10μF, ±20%, 16V
CV17	24203100	EL, 10μF, ±20%, 16V
CV18	24203100	EL, 10μF, ±20%, 16V
CV19	24814103	Chip, 0.01μF, +80%, −20%
CV20	24203100	EL, 10μF, ±20%, 16V
CV22	24203100	EL, 10μF, ±20%, 16V
CV23	24203100	EL, 10μF, ±20%, 16V
CV25	24814103	Chip, 0.01μF, +80%, −20%
CV28	24538104	PF, 0.1μF
CV29(U101)	24590102	PF, 1000pF
CV29(U003)	24203100	EL, 10μF, ±20%, 16V
CV30	24590102	PF, 1000pF
CV32	24815102	Chip, 1000pF, ±10%, B
CV34	24815102	Chip, 1000pF, ±10%, B
CV36	24203100	EL, 10μF, ±20%, 16V
CV38	24203101	EL, 100μF, ±20%, 16V
CV39	24781101	Chip, 100pF, SL
CV60	24203100	EL, 10μF, ±20%, 16V
CV61	24203100	EL, 10μF, ±20%, 16V
CV70	24203101	EL, 100μF, ±20%, 16V
CV75	24763471	EL, 470μF, ±20%, 16V
CV90	24206229	EL, 2.2μF, 50V
CV91	24203100	EL, 10μF, ±20%, 16V
CV96	24206010	EL, 1μF, 50V
CV97	24206010	EL, 1μF, 50V
CW26	24815102	Chip, 1000pF, ±10%, B
CW29	24815102	Chip, 1000pF, ±10%, B
CW30	24203101	EL, 100μF, ±20%, 16V

RESISTORS

R101	24366472	CF, 4700 ohm
R102	24366562	CF, 5600 ohm
R103	24366562	CF, 5600 ohm
R180	24366181	CF, 180 ohm
R242	24367153	CF, 15k ohm, ±2%
R243	24367362	CF, 3600 ohm, ±2%
R250	24366221	CF, 220 ohm
R251	24366223	CF, 22k ohm
R252	24366104	CF, 100k ohm
R254	24366122	CF, 1200 ohm
R255	24366473	CF, 47k ohm
R256	24366561	CF, 560 ohm
R258	24366122	CF, 1200 ohm
R259	24366473	CF, 47k ohm
R260	24366223	CF, 22k ohm
R261	24366104	CF, 100k ohm
R265	24366822	CF, 8200 ohm
R266	24366562	CF, 5600 ohm
R267	24366822	CF, 8200 ohm

Location No.	Part No.	Description
R268	24366562	CF, 5600 ohm
R269	24366222	CF, 2200 ohm
R270	24366222	CF, 2200 ohm
R303	24366273	CF, 27k ohm
R304	24366513	CF, 51k ohm
R305	24322918	MF, 0.91 ohm, 1W
R306	24366563	CF, 56k ohm
R307	24366274	CF, 270k ohm
R308	24366102	CF, 1k ohm
R309	24382221	OMF, 220 ohm, 1W
R312	24366224	CF, 220k ohm
R313(U101)	24366104	CF, 100k ohm
R313(U002)	24321159	MF, 1.5 ohm, 1/2W
R314	24366105	CF, 1M ohm
R315	24366155	CF, 1.5M ohm
R316	24366154	CF, 150k ohm
R317(U002)	24366102	CF, 1k ohm
R317(U101)	24366102	CF, 1k ohm
R318	24366102	CF, 1k ohm
⚠R327	24339479	MF, 4.7 ohm, 2W
R336	24383271	OMF, 270 ohm, 2W
R340	24366472	CF, 4700 ohm
R341(U002)	24366392	CF, 3900 ohm
R341(U101)	24366183	CF, 18k ohm
R342	24553271	OMF, 270 ohm, 1W
R343	24553361	OMF, 360 ohm, 1W
R344	24366101	CF, 100 ohm
R350	24066924	VR, 50k ohm, 1/10W
R401	24366391	CF, 390 ohm
R403(U002)	24366102	CF, 1k ohm
R403(U101)	24552561	OMF, 560 ohm, 1/2W
R405	24366682	CF, 6800 ohm
R410	24552472	OMF, 4700 ohm, 1/2W
R411	24366561	CF, 560 ohm
R412	24366562	CF, 5600 ohm
R413(U101)	24366184	CF, 180k ohm
R413(U002)	24366151	CF, 150 ohm
R415	24553272	OMF, 2700 ohm, 1W
R416	24510512	Cement, 5100 ohm, 5W
R421	24366105	CF, 1M ohm
R422	24366103	CF, 10k ohm
R423	24366102	CF, 1k ohm
R424	24366272	CF, 2700 ohm
R427	24366104	CF, 100k ohm
R439	24381333	OMF, 33k ohm, 1/2W
R440	24366472	CF, 4700 ohm
R442	24532102	FR, 1k ohm, 1W
R444	24338398	MF, 0.39 ohm, 1W
R446	24533151	FR, 150 ohm, 2W
⚠R448	24338338	MF, 0.33 ohm, 1W
R470	24338398	MF, 0.39 ohm, 1W
R471	24552101	OMF, 100 ohm, 1/2W
R472	24376393	CF, 39k ohm, 1/2W
R474	24366331	CF, 330 ohm
R475	24366102	CF, 1k ohm
R476	24366221	CF, 220 ohm
R477	24366153	CF, 15k ohm
R485	24552152	OMF, 1500 ohm, 1/2W
R486	24552822	OMF, 8200 ohm, 1/2W
R490	24366182	CF, 1800 ohm
R492	24552103	OMF, 10k ohm, 1/2W
R495	24366473	CF, 47k ohm
R496	24366152	CF, 1500 ohm
R497	24366562	CF, 5600 ohm

Location No.	Part No.	Description
R498	24366392	CF, 3900 ohm
R499	24321109	MF, 1 ohm, 1/2W
R508	24366101	CF, 100 ohm
R509	24366101	CF, 100 ohm
R510	24366221	CF, 220 ohm
R511	24366221	CF, 220 ohm
R512	24366221	CF, 220 ohm
R513	24366221	CF, 220 ohm
R514	24366221	CF, 220 ohm
R515	24366101	CF, 100 ohm
R516	24366101	CF, 100 ohm
R517	24366101	CF, 100 ohm
R518	24366221	CF, 220 ohm
R520	24366103	CF, 10k ohm
R521	24366475	CF, 4.7M ohm
R522	24366395	CF, 3.9M ohm
R523	24366333	CF, 33k ohm
R524	24366302	CF, 3k ohm
R525	24366623	CF, 62k ohm
R526	24366243	CF, 24k ohm
R527	24366103	CF, 10k ohm
R528	24366102	CF, 1k ohm
R529	24366155	CF, 1.5M ohm
R532	24366272	CF, 2700 ohm
R533	24366564	CF, 560k ohm
R534	24366394	CF, 390k ohm
R535	24366102	CF, 1k ohm
R536	24366102	CF, 1k ohm
R537	24366103	CF, 10k ohm
R538	24366102	CF, 1k ohm
R539	24366103	CF, 10k ohm
R540	24366153	CF, 15k ohm
R541	24366103	CF, 10k ohm
R545	24872102	Chip, 1k ohm, 1/16W
R560	24552221	OMF, 220 ohm, 1/2W
R561	24366561	CF, 560 ohm
R562	24366561	CF, 560 ohm
R630	24872103	Chip, 10k ohm, 1/16W
R631	24872103	Chip, 10k ohm, 1/16W
R639	24553101	OMF, 100 ohm, 1W
R640	24872333	Chip, 33k ohm, 1/16W
R641	24872273	Chip, 27k ohm, 1/16W
R644	24872912	Chip, 9100 ohm, 1/16W
R645	24872103	Chip, 10k ohm, 1/16W
R646	24872333	Chip, 33k ohm, 1/16W
R647	24872272	Chip, 2700 ohm, 1/16W
R648	24872223	Chip, 22k ohm, 1/16W
R649	24872223	Chip, 22k ohm, 1/16W
R650	24872473	Chip, 47k ohm, 1/16W
R652	24872103	Chip, 10k ohm, 1/16W
R654	24872473	Chip, 47k ohm, 1/16W
R655	24872103	Chip, 10k ohm, 1/16W
R656	24872392	Chip, 3900 ohm, 1/16W
R657	24872223	Chip, 22k ohm, 1/16W
R665	24552181	OMF, 180 ohm, 1/2W
R666	24552181	OMF, 180 ohm, 1/2W
R667	24872473	Chip, 47k ohm, 1/16W
R668	24872223	Chip, 22k ohm, 1/16W
R670	24366332	CF, 3300 ohm
R671	24366472	CF, 4700 ohm
R672	24366562	CF, 5600 ohm
R673	24366272	CF, 2700 ohm
R674	24366562	CF, 5600 ohm
R675	24366272	CF, 2700 ohm

Location No.	Part No.	Description
R681	24366332	CF, 3300 ohm
R682	24366229	CF, 2.2 ohm
R683	24366229	CF, 2.2 ohm
R684	24366229	CF, 2.2 ohm
R685	24531100	FR, 10 ohm, 1/2W
R701	24366153	CF, 15k ohm
R702	24366222	CF, 2200 ohm
R703	24366271	CF, 270 ohm
R704	24366101	CF, 100 ohm
R705	24366222	CF, 2200 ohm
R706	24366102	CF, 1k ohm
R708	24366102	CF, 1k ohm
R709	24366563	CF, 56k ohm
R710	24366471	CF, 470 ohm
R711	24366331	CF, 330 ohm
R712	24366220	CF, 22 ohm
R713	24366393	CF, 39k ohm
R714	24552121	OMF, 120 ohm, 1/2W
R715	24366223	CF, 22k ohm
R716	24366273	CF, 27k ohm
R717	24366333	CF, 33k ohm
R718	24366222	CF, 2200 ohm
R719	24366392	CF, 3900 ohm
R720	24366392	CF, 3900 ohm
R721	24366102	CF, 1k ohm
R722	24552471	OMF, 470 ohm, 1/2W
R723	24366471	CF, 470 ohm
R724	24366470	CF, 47 ohm
R725	24366182	CF, 1800 ohm
R726(U004)	24366473	CF, 47k ohm
R726(U101)	24366102	CF, 1k ohm
R727	24366273	CF, 27k ohm
R728	24366222	CF, 2200 ohm
R729	24366104	CF, 100k ohm
R730	24552100	OMF, 10 ohm, 1/2W
R731	24552331	OMF, 330 ohm, 1/2W
R732	24366820	CF, 82 ohm
R733	24366683	CF, 68k ohm
R734	24366820	CF, 82 ohm
R735	24366683	CF, 68k ohm
R736	24552510	OMF, 51 ohm, 1/2W
R737	24366152	CF, 1500 ohm
R738	24366123	CF, 12k ohm
R739	24366152	CF, 1500 ohm
R740	24552510	OMF, 51 ohm, 1/2W
⚠R741	24321279	MF, 2.7 ohm, 1/2W
⚠R742	24321279	MF, 2.7 ohm, 1/2W
R743	24554221	OMF, 220 ohm, 2W
R744	24366122	CF, 1200 ohm
R745	24366122	CF, 1200 ohm
⚠R801	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
R810	24568271	Cement, 270 ohm, 7W
R819	24366681	CF, 680 ohm
R820	24546339	FR, 3.3 ohm, 1/2W
R821	24321229	MF, 2.2 ohm, 1/2W
R822	24510100	Cement, 10 ohm, 5W
R823	24552102	OMF, 1k ohm, 1/2W
R825	24366561	CF, 560 ohm
R826	24533100	FR, 10 ohm, 2W
R827	24366561	CF, 560 ohm
R828	24377224	CF, 220k ohm, 1W
R829	24384563	OMF, 56k ohm, 3W
R830	24366682	CF, 6800 ohm

Location No.	Part No.	Description
R832	24552152	OMF, 1500 ohm, 1/2W
R833	24366510	CF, 51 ohm
R835	24552681	OMF, 680 ohm, 1/2W
R836	24552221	OMF, 220 ohm, 1/2W
R837	24366393	CF, 39k ohm
R838	24322278	MF, 0.27 ohm, 1W
R839	24322278	MF, 0.27 ohm, 1W
R840	24366102	CF, 1k ohm
R841	24321828	MF, 0.82 ohm, 1/2W
R842	24366242	CF, 2400 ohm
R843	24383682	OMF, 6800 ohm, 2W
R844	24366182	CF, 1800 ohm
R847	24546189	FR, 1.8 ohm, 1/2W
R848	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R849	24552102	OMF, 1k ohm, 1/2W
R850	24366102	CF, 1k ohm
R853	24366222	CF, 2200 ohm
R854	24367332	CF, 3300 ohm, ±2%
R855	24366102	CF, 1k ohm
R856	24366561	CF, 560 ohm
R857	24366561	CF, 560 ohm
R858	24366681	CF, 680 ohm
R859	24367822	CF, 8200 ohm, ±2%
R863	24366102	CF, 1k ohm
R864	24552820	OMF, 82 ohm, 1/2W
R865	24366472	CF, 4700 ohm
R866	24366222	CF, 2200 ohm
R867	24366102	CF, 1k ohm
R868	24377274	CF, 270k ohm, 1W
R869	24367433	CF, 43k ohm, ±2%
R870	24383133	OMF, 13k ohm, 2W
R871	24007061	Cement, 1.8 ohm, ±10%, 2W
R872	24007515	Cement, 0.51 ohm, 15W
R873	24366333	CF, 33k ohm
R874	24366181	CF, 180 ohm
R875	24366470	CF, 47 ohm
R876	24366680	CF, 68 ohm
R877	24366222	CF, 2200 ohm
R878	24531680	FR, 68 ohm, 1/2W
R879	24366472	CF, 4700 ohm
R880	24366272	CF, 2700 ohm
R881	24366333	CF, 33k ohm
R882	24510479	Cement, 4.7 ohm, 5W
R883	24366332	CF, 3300 ohm
R884	24321919	MF, 9.1 ohm, 1/2W
R886	24366332	CF, 3300 ohm
R887	24366472	CF, 4700 ohm
⚠R890	24000875	PTC Thermistor, 18 ohm, ±20%, 290V
R892	24366102	CF, 1k ohm
R893	24366103	CF, 10k ohm
R895	24552391	OMF, 390 ohm, 1/2W
R898	24569270	Cement, 27 ohm, 10W
R901	24946561	CC, 560 ohm, ±10%, 1/2W
R902	24946561	CC, 560 ohm, ±10%, 1/2W
R903	24946561	CC, 560 ohm, ±10%, 1/2W
R904	24366103	CF, 10k ohm
R905	24366101	CF, 100 ohm
R906	24552101	OMF, 100 ohm, 1/2W
R909	24366222	CF, 2200 ohm
R912	24366471	CF, 470 ohm
R914	24366561	CF, 560 ohm
R915	24366101	CF, 100 ohm

Location No.	Part No.	Description
R916	24366620	CF, 62 ohm
R917	24366471	CF, 470 ohm
R918	24366820	CF, 82 ohm
R919	24366471	CF, 470 ohm
⚠R920	24000940	FR, 2 ohm, 2W
R921	24366561	CF, 560 ohm
R922	24366101	CF, 100 ohm
R924	24366820	CF, 82 ohm
R925	24366471	CF, 470 ohm
R926	24366471	CF, 470 ohm
R928	24366561	CF, 560 ohm
R929	24366101	CF, 100 ohm
R930	24366820	CF, 82 ohm
R932	24366152	CF, 1500 ohm
R933	24366750	CF, 75 ohm
R934	24366391	CF, 390 ohm
R935	24366821	CF, 820 ohm
R936	24366750	CF, 75 ohm
R937	24366471	CF, 470 ohm
R942	24366392	CF, 3900 ohm
R943	24366392	CF, 3900 ohm
R944	24366392	CF, 3900 ohm
R945	24366620	CF, 62 ohm
R946	24366620	CF, 62 ohm
R950	24060356	VR, 20M ohm, 0.6W
R960	24383153	OMF, 15k ohm, 2W
R961	24383153	OMF, 15k ohm, 2W
R962	24383153	OMF, 15k ohm, 2W
R963	24383153	OMF, 15k ohm, 2W
R964	24383153	OMF, 15k ohm, 2W
R965	24383153	OMF, 15k ohm, 2W
R977	24366122	CF, 1200 ohm
RA01	24366102	CF, 1k ohm
RA02	24366392	CF, 3900 ohm
RA03	24366103	CF, 10k ohm
RA04	24366223	CF, 22k ohm
RA05	24366392	CF, 3900 ohm
RA06	24366473	CF, 47k ohm
RA07	24366222	CF, 2200 ohm
RA08	24366103	CF, 10k ohm
RA09	24366103	CF, 10k ohm
RA11	24366153	CF, 15k ohm
RA13	24366473	CF, 47k ohm
RA14	24366103	CF, 10k ohm
RA15	24366103	CF, 10k ohm
RA16	24366103	CF, 10k ohm
RA17	24366103	CF, 10k ohm
RA18	24366103	CF, 10k ohm
RA19	24366103	CF, 10k ohm
RA20	24366472	CF, 4700 ohm
RA21	24366301	CF, 300 ohm
RA22	24366301	CF, 300 ohm
RA23	24366102	CF, 1k ohm
RA25	24366101	CF, 100 ohm
RA26	24366102	CF, 1k ohm
RA29	24366472	CF, 4700 ohm
RA30	24366103	CF, 10k ohm
RA32	24366103	CF, 10k ohm
RA38	24366473	CF, 47k ohm
RA53	24366102	CF, 1k ohm
RA56	24366472	CF, 4700 ohm
RA57	24366822	CF, 8200 ohm
RA59	24366822	CF, 8200 ohm
RA60	24366822	CF, 8200 ohm

Location No.	Part No.	Description
RA61	24366332	CF, 3300 ohm
RA62	24366103	CF, 10k ohm
RA63	24366103	CF, 10k ohm
RA64	24366103	CF, 10k ohm
RA65	24366392	CF, 3900 ohm
RA66	24366102	CF, 1k ohm
RA67	24366153	CF, 15k ohm
RA68	24366332	CF, 3300 ohm
RA70	24366561	CF, 560 ohm
RA71	24366564	CF, 560k ohm
RA72	24366473	CF, 47k ohm
RA73	24366123	CF, 12k ohm
RA74	24366392	CF, 3900 ohm
RA75	24366103	CF, 10k ohm
RA76	24366223	CF, 22k ohm
RA79	24366123	CF, 12k ohm
RA81	24366101	CF, 100 ohm
RA82	24366101	CF, 100 ohm
RA89	24366471	CF, 470 ohm
RA95	24366332	CF, 3300 ohm
RA96	24872102	Chip, 1k ohm, 1/16W
RA97(U003)	24872101	Chip, 100 ohm, 1/16W
RA97(U101)	24366332	CF, 3300 ohm
RA98(U101)	24366682	CF, 6800 ohm
RA98(U003)	24872101	Chip, 100 ohm, 1/16W
RA99	24366203	CF, 20k ohm
RB01	24366472	CF, 4700 ohm
RB02	24366332	CF, 3300 ohm
RB03	24366223	CF, 22k ohm
RB04	24366102	CF, 1k ohm
RB05	24366103	CF, 10k ohm
RB06	24366473	CF, 47k ohm
RB07	24366564	CF, 560k ohm
RB08	24366102	CF, 1k ohm
RB09	24366472	CF, 4700 ohm
RB12	24366223	CF, 22k ohm
RB14	24366102	CF, 1k ohm
RB18	24366562	CF, 5600 ohm
RB21	24366223	CF, 22k ohm
RB22	24366223	CF, 22k ohm
RB23	24366223	CF, 22k ohm
RD01	24000211	FR, 15 ohm, 1/2W
RD02	24322479	MF, 4.7 ohm, 1W
RD03	24366562	CF, 5600 ohm
RD04	24552102	OMF, 1k ohm, 1/2W
RD05	24552332	OMF, 3300 ohm, 1/2W
RD06	24366912	CF, 9100 ohm
RD07	24366273	CF, 27k ohm
RD08	24366114	CF, 110k ohm
RD09	24366153	CF, 15k ohm
RD10	24366153	CF, 15k ohm
RD11	24003924	MF, 3300 ohm, 1/4W
RE51	24366471	CF, 470 ohm
RJ01	24000824	Chip, Jumper, 2125 type
RJ02	24000824	Chip, Jumper, 2125 type
RJ03	24000824	Chip, Jumper, 2125 type
RJ04	24000824	Chip, Jumper, 2125 type
RJ08	24000824	Chip, Jumper, 2125 type
RJ09	24000824	Chip, Jumper, 2125 type
RJ10	24000824	Chip, Jumper, 2125 type
RJ13	24000824	Chip, Jumper, 2125 type
RJ14	24000824	Chip, Jumper, 2125 type
RJ15	24000824	Chip, Jumper, 2125 type
RL03	24366101	CF, 100 ohm

Location No.	Part No.	Description
RL04	24366101	CF, 100 ohm
RL05	24366394	CF, 390k ohm
RL06	24366105	CF, 1M ohm
RL07	24366394	CF, 390k ohm
RL08	24366184	CF, 180k ohm
RL09	24366332	CF, 3300 ohm
RL10	24366103	CF, 10k ohm
RL12	24366221	CF, 220 ohm
RL13	24366102	CF, 1k ohm
RL14	24366102	CF, 1k ohm
RL15	24366101	CF, 100 ohm
RL16	24366101	CF, 100 ohm
RL17	24366101	CF, 100 ohm
RL18	24366102	CF, 1k ohm
RL19	24366332	CF, 3300 ohm
RL20	24366101	CF, 100 ohm
RL24	24366273	CF, 27k ohm
RL25	24366684	CF, 680k ohm
RL27	24366563	CF, 56k ohm
RM01	24366103	CF, 10k ohm
RM02	24366243	CF, 24k ohm
RM03	24366101	CF, 100 ohm
RM04	24366101	CF, 100 ohm
RM05	24366102	CF, 1k ohm
RM06	24366102	CF, 1k ohm
RM07	24366511	CF, 510 ohm
RM08	24366100	CF, 10 ohm
RM09	24366821	CF, 820 ohm
RM10	24366272	CF, 2700 ohm
RM11	24366821	CF, 820 ohm
RM12	24366102	CF, 1k ohm
RM13	24366102	CF, 1k ohm
RM15	24366473	CF, 47k ohm
RM16	24366223	CF, 22k ohm
RM17	24366223	CF, 22k ohm
RM19	24366271	CF, 270 ohm
RM20	24366222	CF, 2200 ohm
RM21	24366475	CF, 4.7M ohm
RN07	24872101	Chip, 100 ohm, 1/16W
RN16	24366103	CF, 10k ohm
RN17	24366103	CF, 10k ohm
RN18	24366223	CF, 22k ohm
RN86	24366473	CF, 47k ohm
RP01	24366561	CF, 560 ohm
RS10	24366103	CF, 10k ohm
RS13	24366103	CF, 10k ohm
RS20	24366103	CF, 10k ohm
RS21	24366103	CF, 10k ohm
RS23	24366473	CF, 47k ohm
RS47	24366273	CF, 27k ohm
RS48	24366104	CF, 100k ohm
RS77	24366153	CF, 15k ohm
RS78	24366123	CF, 12k ohm
RS79	24366183	CF, 18k ohm
RS80	24366183	CF, 18k ohm
RS82	24366472	CF, 4700 ohm
RS83	24366472	CF, 4700 ohm
RS84	24366123	CF, 12k ohm
RS87	24366183	CF, 18k ohm
RS88	24366183	CF, 18k ohm
RS89	24366123	CF, 12k ohm
RS90	24366472	CF, 4700 ohm
RS91	24366472	CF, 4700 ohm
RS92	24366123	CF, 12k ohm

Location No.	Part No.	Description
RS93	24366822	CF, 8200 ohm
RS94	24366273	CF, 27k ohm
RS95	24366822	CF, 8200 ohm
RS96	24366273	CF, 27k ohm
RS97	24366153	CF, 15k ohm
RS98	24366473	CF, 47k ohm
RS99	24366123	CF, 12k ohm
RT01	24366102	CF, 1k ohm
RT02	24366561	CF, 560 ohm
RT03	24366821	CF, 820 ohm
RT04	24366271	CF, 270 ohm
RT05	24366153	CF, 15k ohm
RT06	24366183	CF, 18k ohm
RT09	24366104	CF, 100k ohm
RT10	24366822	CF, 8200 ohm
RT11	24366822	CF, 8200 ohm
RT18	24366301	CF, 300 ohm
RT19	24366132	CF, 1300 ohm
RT20	24366132	CF, 1300 ohm
RT27	24366822	CF, 8200 ohm
RT30	24366471	CF, 470 ohm
RT31	24366752	CF, 7500 ohm
RT40	24366102	CF, 1k ohm
RT41	24366472	CF, 4700 ohm
RT51	24366241	CF, 240 ohm
RV02	24872101	Chip, 100 ohm, 1/16W
RV03	24366332	CF, 3300 ohm
RV04	24366101	CF, 100 ohm
RV05	24872101	Chip, 100 ohm, 1/16W
RV06	24872101	Chip, 100 ohm, 1/16W
RV07	24872472	Chip, 4700 ohm, 1/16W
RV08	24872472	Chip, 4700 ohm, 1/16W
RV09	24872101	Chip, 100 ohm, 1/16W
RV10	24872472	Chip, 4700 ohm, 1/16W
RV11	24872101	Chip, 100 ohm, 1/16W
RV12	24872472	Chip, 4700 ohm, 1/16W
RV15	24872101	Chip, 100 ohm, 1/16W
RV16	24872472	Chip, 4700 ohm, 1/16W
RV17	24872101	Chip, 100 ohm, 1/16W
RV18	24872472	Chip, 4700 ohm, 1/16W
RV19	24872101	Chip, 100 ohm, 1/16W
RV20	24872473	Chip, 47k ohm, 1/16W
RV21	24872473	Chip, 47k ohm, 1/16W
RV24	24872473	Chip, 47k ohm, 1/16W
RV27	24872820	Chip, 82 ohm, 1/16W
RV28	24872223	Chip, 22k ohm, 1/16W
RV29(U101)	24366104	CF, 100k ohm
RV29(U003)	24872223	Chip, 22k ohm, 1/16W
RV30(U101)	24366104	CF, 100k ohm
RV30(U003)	24872332	Chip, 3300 ohm, 1/16W
RV31(U003)	24872820	Chip, 82 ohm, 1/16W
RV31(U101)	24366820	CF, 82 ohm
RV32(U003)	24872820	Chip, 82 ohm, 1/16W
RV32(U101)	24366820	CF, 82 ohm
RV33(U101)	24366820	CF, 82 ohm
RV33(U003)	24872820	Chip, 82 ohm, 1/16W
RV34	24872820	Chip, 82 ohm, 1/16W
RV35	24872332	Chip, 3300 ohm, 1/16W
RV37	24872101	Chip, 100 ohm, 1/16W
RV38	24366101	CF, 100 ohm
RV39	24366101	CF, 100 ohm
RV43	24872103	Chip, 10k ohm, 1/16W
RV44	24872103	Chip, 10k ohm, 1/16W
RV45	24872104	Chip, 100k ohm, 1/16W

Location No.	Part No.	Description
RV46	24872104	Chip, 100k ohm, 1/16W
RV47	24872102	Chip, 1k ohm, 1/16W
RV48	24872102	Chip, 1k ohm, 1/16W
RV49	24872102	Chip, 1k ohm, 1/16W
RV50	24872102	Chip, 1k ohm, 1/16W
RV51	24872101	Chip, 100 ohm, 1/16W
RV52	24872101	Chip, 100 ohm, 1/16W
RV53	24872104	Chip, 100k ohm, 1/16W
RV54	24872104	Chip, 100k ohm, 1/16W
RV59	24872473	Chip, 47k ohm, 1/16W
RV60	24872561	Chip, 560 ohm, 1/16W
RV61	24872561	Chip, 560 ohm, 1/16W
RV62	24872751	Chip, 750 ohm, 1/16W
RV74	24872331	Chip, 330 ohm, 1/16W
RV75	24872471	Chip, 470 ohm, 1/16W
RV76	24872221	Chip, 220 ohm, 1/16W
RV77	24872101	Chip, 100 ohm, 1/16W
RV78	24872101	Chip, 100 ohm, 1/16W
RV79	24552391	OMF, 390 ohm, 1/2W
RV86	24872682	Chip, 6800 ohm, 1/16W
RV87	24872332	Chip, 3300 ohm, 1/16W
RV88	24872472	Chip, 4700 ohm, 1/16W
RV89	24872182	Chip, 1800 ohm, 1/16W
RV90	24872680	Chip, 68 ohm, 1/16W
RV91	24872103	Chip, 10k ohm, 1/16W
RV94	24872103	Chip, 10k ohm, 1/16W
RV95	24872820	Chip, 82 ohm, 1/16W
RW26	24872104	Chip, 100k ohm, 1/16W
RW29	24872104	Chip, 100k ohm, 1/16W
RW30	24553680	OMF, 68 ohm, 1W
RW40	24872103	Chip, 10k ohm, 1/16W
RW80	24872101	Chip, 100 ohm, 1/16W
RW91	24872101	Chip, 100 ohm, 1/16W
RX35	24366103	CF, 10k ohm
RX39	24366271	CF, 270 ohm
RX46	24366821	CF, 820 ohm
RX47	24366473	CF, 47k ohm
RX48	24366473	CF, 47k ohm
RX55	24366271	CF, 270 ohm
RX56	24366271	CF, 270 ohm
RX57	24366271	CF, 270 ohm
RX69	24366102	CF, 1k ohm
RZ01	24366471	CF, 470 ohm
RZ02	24872271	Chip, 270 ohm, 1/16W

COILS & TRANSFORMERS

L180	23238554	Coil, Peaking, TRF4R22AJ
L250	23238708	Coil, Peaking, TRF4330AJ
L251	23238710	Coil, Peaking, TRF4220AJ
L301	23103859	Coil (Ferrite Bead), TEM2011
L302	23289100	Coil, Peaking, TRF4100AF
L400	23289220	Coil, Peaking, TRF4220AF
L402	23289100	Coil, Peaking, TRF4100AF
L405	23221685	Coil, Choke, TLN3193
L406(U101)	23289101	Coil, Peaking, TRF4101AF
L406(U002)	23103859	Coil (Ferrite Bead), TEM2011
L412	23221684	Coil, Choke, TLN3191D
L414	23103859	Coil (Ferrite Bead), TEM2011
L440	23233064	Coil, Width, TLN2110
L441	23233947	Coil, Linearity, TLN2144G
L442	23221894	Coil, Choke, TLN3063
⚠L462	23231043	Deflection Yoke, TDY-629DA
L680	23238714	Coil, Peaking, TRF4100AJ
L681	23238714	Coil, Peaking, TRF4100AJ

Location No.	Part No.	Description
L682	23289100	Coil, Peaking, TRF4100AF
L683	23238714	Coil, Peaking, TRF4100AJ
L702	23261974	Coil, Choke, HC5-035
L703	23289470	Coil, Peaking, TRF4470AF
L704	23103859	Coil (Ferrite Bead), TEM2011
L705	23103859	Coil (Ferrite Bead), TEM2011
L823	23221747	Coil, Choke, TRF9253D
L824	23103961	Coil (Ferrite Bead), ZBF253D-02
L825	23103961	Coil (Ferrite Bead), ZBF253D-02
L826	23221746	Coil, Choke, TLN3155D
L827	23237994	Coil, Peaking, TRF4279AC
L828	23237770	Coil, Peaking, TRF4R22AC
L834	23103859	Coil (Ferrite Bead), TEM2011
L841	23103859	Coil (Ferrite Bead), TEM2011
L844	23103859	Coil (Ferrite Bead), TEM2011
L860	23103859	Coil (Ferrite Bead), TEM2011
L866	23222694	Coil, Width, TLN2026
L871	23103859	Coil (Ferrite Bead), TEM2011
L881	23222694	Coil, Width, TLN2026
⚠L901	23200686	Coil, Degaussing, TSB-2311AC
L901(U004)	23237975	Coil, Peaking, TRF4101AC
L902	23289101	Coil, Peaking, TRF4101AF
L903	23289101	Coil, Peaking, TRF4101AF
L904	23289101	Coil, Peaking, TRF4101AF
L905	23289390	Coil, Peaking, TRF4390AF
L906	23289390	Coil, Peaking, TRF4390AF
L907	23289390	Coil, Peaking, TRF4390AF
LA01	23289100	Coil, Peaking, TRF4100AF
LA04	23238714	Coil, Peaking, TRF4100AJ
LA05	23289100	Coil, Peaking, TRF4100AF
LA10	23103819	Coil (Ferrite Bead), TEM2015
LA12	23221685	Coil, Choke, TLN3193
LB01	23262001	Coil, IF, TRF1166D
LD02(U002)	23221686	Coil, Choke, TLN3197D
LD02(U101)	23238562	Coil, Peaking, TRF4109AJ
LL01	23238708	Coil, Peaking, TRF4330AJ
LM02	23238709	Coil, Peaking, TRF4270AJ
LM10	23238712	Coil, Peaking, TRF4150AJ
LT07	23238714	Coil, Peaking, TRF4100AJ
LV01(U003)	23238705	Coil, Peaking, TRF4560AJ
LV01(U101)	23238705	Coil, Peaking, TRF4560AJ
LV02	23238705	Coil, Peaking, TRF4560AJ
LV04	23238713	Coil, Peaking, TRF4120AJ
LZ01	23238710	Coil, Peaking, TRF4220AJ
T400	23224346	Transformer, Focus, TLN2168
⚠T401	23224336	Transformer, Horiz. Drive, TLN1083
⚠T461Z	23236456	Transformer, Flyback, TFB4118ZD
⚠T801	23211665	Line Filter, TRF3196
⚠T802	23211002	Line Filter, TRF3173
⚠T803	23217232	Transformer, Converter, TPW3296AG

SEMICONDUCTORS

IC200	B0372960	IC, TA78L009AP
IC301	B0378560	IC, TA8427K
IC408	23319314	IC, μPC2412HF
IC501	B0384670	IC, TA8857N
IC502	B0383881	IC, TA8772AN
IC640	23319802	IC, LM358N
IC641	23119275	IC, M5222L
IC670	B0377305	IC, TA8218AH
IC827	23319693	IC, SE116N, LF4
IC835	23318299	IC, L78MR05
IC860	23319871	IC, PQ12RF1
ICA01	23904679	IC, CXP85332-120
ICA07	23904756	IC, CAT24C08P
ICA08	23319935	IC, MM1096BS
ICS80	23319251	IC, MC1458P1
ICS81	23319251	IC, MC1458P1
ICS82	B0470532	IC, TC4053BP
ICL01	B0385400	IC, TA1200N
ICM01	B0383850	IC, TA8765N
ICT01	B0384370	IC, TA8814N
ICV01	B0384763	IC, TA8851BN
ICV05	B0372960	IC, TA78L009AP
Q250	A6342206	Transistor, 2SC2878-A(TE)
Q251	A6342206	Transistor, 2SC2878-A(TE)
Q253	A6317440	Transistor, 2SC1815-Y
Q254	A6317440	Transistor, 2SC1815-Y
Q305	23314701	Transistor, 2SB1186A, E
Q306	23314705	Transistor, 2SD1763A, VE
Q402	A678971D	Transistor, 2SC1569 FA-5
Q403	23114528	Transistor, 2SC1740S-Q
⚠Q404	A6872801	Transistor, 2SD2253
Q410	A6002040	Transistor, RN1204
Q421	23114528	Transistor, 2SC1740S-Q
Q470	A6547250	Transistor, 2SA1320
Q490	23114530	Transistor, 2SA933S-Q
Q503	23114528	Transistor, 2SC1740S-Q
Q504	23114530	Transistor, 2SA933S-Q
Q505	23114528	Transistor, 2SC1740S-Q
Q506	23114528	Transistor, 2SC1740S-Q
Q546	23314204	Transistor, 2SC2412K, Q
Q642	A6004020	Transistor, RN1402
Q701	23114528	Transistor, 2SC1740S-Q
Q704	A6734590	Transistor, 2SC752(G)TM-Y
Q705	23114528	Transistor, 2SC1740S-Q
Q706	23114528	Transistor, 2SC1740S-Q
Q707	A6734590	Transistor, 2SC752(G)TM-Y
Q709	23114528	Transistor, 2SC1740S-Q
Q710	23114530	Transistor, 2SA933S-Q
Q711	A6546665	Transistor, 2SA1306-Y
Q712	A6359135	Transistor, 2SC3298A-Y
Q713	23114528	Transistor, 2SC1740S-Q
Q714	A6012040	Transistor, RN2204
Q715	A6002040	Transistor, RN1204
Q716	23114528	Transistor, 2SC1740S-Q
Q717	23114528	Transistor, 2SC1740S-Q
Q718	A6012040	Transistor, RN2204
Q719	23114528	Transistor, 2SC1740S-Q
Q720(U004)	23114528	Transistor, 2SC1740S-Q
Q720(U101)	23114528	Transistor, 2SC1740S-Q
Q722	A6734585	Transistor, 2SC752(G)TM-O
Q819	23314141	Transistor, 2SC3852
Q820	A6333346	Transistor, 2SC2655-Y(C)
Q821	A6330438	Transistor, 2SC2500-C(C)
Q822	A6542312	Transistor, 2SA1160-B(C)
Q823	23314745	Transistor, 2SC4706, L15
Q824	A6317440	Transistor, 2SC1815-Y
Q825	23114528	Transistor, 2SC1740S-Q
⚠Q826	A8643108	IC, Photo Coupler, TLP621(GR-LF)
Q828	A6325067	Transistor, 2SC2230A-Y

Location No.	Part No.	Description
⚠Q829	A8643108	IC, Photo Coupler, TLP621(GR-LF)
Q831	A6002060	Transistor, RN1206
Q832	23114530	Transistor, 2SA933S-Q
Q834	A6002060	Transistor, RN1206
Q836	23114530	Transistor, 2SA933S-Q
Q837	A6321265	Transistor, 2SC2120-Y(TE)
Q838	23114530	Transistor, 2SA933S-Q
Q839	A6509154	Transistor, 2SA562TM-Y(T)
Q840	23114528	Transistor, 2SC1740S-Q
Q841	23114530	Transistor, 2SA933S-Q
Q842	23114530	Transistor, 2SA933S-Q
Q861	23314141	Transistor, 2SC3852
Q870	A6333346	Transistor, 2SC2655-Y(C)
Q871	23114528	Transistor, 2SC1740S-Q
Q901	A6368700	Transistor, 2SC4544
Q902	23114528	Transistor, 2SC1740S-Q
Q903	A6368700	Transistor, 2SC4544
Q904	23114528	Transistor, 2SC1740S-Q
Q905	A6368700	Transistor, 2SC4544
Q906	23114528	Transistor, 2SC1740S-Q
Q907	A6509154	Transistor, 2SA562TM-Y(T)
Q908	A6321265	Transistor, 2SC2120-Y(TE)
QA06	23114528	Transistor, 2SC1740S-Q
QA10	A6317440	Transistor, 2SC1815-Y
QA11	A6534053	Transistor, 2SA1015-Y(TE)
QA15	A6317440	Transistor, 2SC1815-Y
QA99	23114528	Transistor, 2SC1740S-Q
QB01	A6534053	Transistor, 2SA1015-Y(TE)
QB02	23114528	Transistor, 2SC1740S-Q
QB03	23114528	Transistor, 2SC1740S-Q
QB04	23114528	Transistor, 2SC1740S-Q
QD01	23314850	Transistor, 2SA1788, E
QD02	A6317440	Transistor, 2SC1815-Y
QD03	A6317440	Transistor, 2SC1815-Y
QL02	23114528	Transistor, 2SC1740S-Q
QL03	23114528	Transistor, 2SC1740S-Q
QM02	23114530	Transistor, 2SA933S-Q
QM03	23114530	Transistor, 2SA933S-Q
QM04	A6342206	Transistor, 2SC2878-A(TE)
QM05	23114528	Transistor, 2SC1740S-Q
QM06	23114528	Transistor, 2SC1740S-Q
QN16	A6342206	Transistor, 2SC2878-A(TE)
QN17	A6342206	Transistor, 2SC2878-A(TE)
QS14	A6342206	Transistor, 2SC2878-A(TE)
QS20	23114530	Transistor, 2SA933S-Q
QS83	23114528	Transistor, 2SC1740S-Q
QT02	23114530	Transistor, 2SA933S-Q
QT09	23114528	Transistor, 2SC1740S-Q
QV02	23114530	Transistor, 2SA933S-Q
QV09	A6359870	Transistor, 2SC3326-B
QV11	A6541130	Transistor, 2SA1162-Y
QV12	A6541130	Transistor, 2SA1162-Y
QV14	23314204	Transistor, 2SC2412K, Q
QV15	23314204	Transistor, 2SC2412K, Q
QV45	23314204	Transistor, 2SC2412K, Q
QV46	A6335470	Transistor, 2SC2712-Y
D110	23115878	Diode, Zener, μPC574J, (L)
D200	23118859	Diode, 1SS133
D301	23118094	Diode, EU2A
D302	23118094	Diode, EU2A
D303	23118859	Diode, 1SS133
D308	23118822	Diode, ERB12-02
D309	23118822	Diode, ERB12-02

Location No.	Part No.	Description
D332	23316794	Diode, SC570A
D340	23118859	Diode, 1SS133
D401	23316321	Diode, Zener, UZ8.2BSB
D402	23316284	Diode, Zener, UZ2.2BSA
D403	23316333	Diode, Zener, UZ12BSB
D404	23316327	Diode, Zener, UZ10BSB
D405	23316309	Diode, Zener, UZ5.6BSB
D406	23118094	Diode, EU2A
D408	23118052	Diode, RU4Z
D439	23316333	Diode, Zener, UZ12BSB
D440	23118094	Diode, EU2A
D441	23316355	Diode, Zener, UZ24BSB
D471	A7801205	SCR, SF0R3G42
D474	23316342	Diode, Zener, UZ16BSB
D475	23316333	Diode, Zener, UZ12BSB
D490	23316333	Diode, Zener, UZ12BSB
D498	23316792	Diode, SC215
D502	23118859	Diode, 1SS133
D503	23118859	Diode, 1SS133
D507	23118859	Diode, 1SS133
D508	23118859	Diode, 1SS133
D509	23316312	Diode, Zener, UZ6.2BSB
D510	23316324	Diode, Zener, UZ9.1BSB
D511	23316324	Diode, Zener, UZ9.1BSB
D512	23316324	Diode, Zener, UZ9.1BSB
D513	23316324	Diode, Zener, UZ9.1BSB
D560	23316306	Diode, Zener, UZ5.1BSB
D640	23118859	Diode, 1SS133
D670	23118859	Diode, 1SS133
D671	23118859	Diode, 1SS133
D672	23118859	Diode, 1SS133
D673	23118859	Diode, 1SS133
D674	23118859	Diode, 1SS133
D675	23118859	Diode, 1SS133
D704	23118859	Diode, 1SS133
D705	23118859	Diode, 1SS133
D706	A7568475	Diode, TVR-2D
D707	A7568475	Diode, TVR-2D
D711	23118859	Diode, 1SS133
D712	23118859	Diode, 1SS133
D720	23118859	Diode, 1SS133
D721	23118859	Diode, 1SS133
D801	23316275	Diode, RBV606 LF-A
D819	23316310	Diode, Zener, UZ5.6BSC
D820	23118095	Diode, ERB44-06
D821	23316322	Diode, Zener, UZ8.2BSC
D822	23316381	Diode, RU1P
D823	23316347	Diode, Zener, UZ20BSA
D824	23118094	Diode, EU2A
D825	23316554	Diode, 1SS146
D828	23316318	Diode, Zener, UZ7.5BSB
D829	23316184	Diode, FML-G12S
D832	23316406	Diode, FML-G16S
D834	23118859	Diode, 1SS133
D836	23316309	Diode, Zener, UZ5.6BSB
D837	23316321	Diode, Zener, UZ8.2BSB
D838	23118859	Diode, 1SS133
D839	23118859	Diode, 1SS133
D840	23118859	Diode, 1SS133
D842	23118859	Diode, 1SS133
D844	23316328	Diode, Zener, UZ10BSC
D859	23118859	Diode, 1SS133
D861	23316309	Diode, Zener, UZ5.6BSB
D862	23316184	Diode, FML-G12S

Location No.	Part No.	Description
D864	23118859	Diode, 1SS133
D865	23118859	Diode, 1SS133
D873	23118859	Diode, 1SS133
D874	23316307	Diode, Zener, UZ5.1BSC
D875	23118859	Diode, 1SS133
D877	23118859	Diode, 1SS133
D878	23316308	Diode, Zener, UZ5.6BSA
D880	23316184	Diode, FML-G12S
D881	23118859	Diode, 1SS133
D901	23118859	Diode, 1SS133
D902	23118859	Diode, 1SS133
D903	23118859	Diode, 1SS133
D904	23118859	Diode, 1SS133
D905	23118859	Diode, 1SS133
D906	23118859	Diode, 1SS133
D907	23118859	Diode, 1SS133
D908	23118859	Diode, 1SS133
D909	23118859	Diode, 1SS133
D910	23118859	Diode, 1SS133
D911	A7568250	Diode, 1S1834
D912	23118859	Diode, 1SS133
D913	23118859	Diode, 1SS133
D914	23118859	Diode, 1SS133
DA01	23316306	Diode, Zener, UZ5.1BSB
DA02	23316312	Diode, Zener, UZ6.2BSB
DA03	23316312	Diode, Zener, UZ6.2BSB
DA04	23118859	Diode, 1SS133
DA06	23316312	Diode, Zener, UZ6.2BSB
DA07	23316312	Diode, Zener, UZ6.2BSB
DA29	23316312	Diode, Zener, UZ6.2BSB
DA30	23118859	Diode, 1SS133
DB02	23316554	Diode, 1SS146
DB03	23118859	Diode, 1SS133
DB04	23118859	Diode, 1SS133
DB07	23316312	Diode, Zener, UZ6.2BSB
DD01	A7568460	Diode, TVR-1B
DD02	23316582	Diode, ERC20-06
DD04	23118859	Diode, 1SS133
DD05	23316332	Diode, Zener, UZ12BSA
DD08	23316309	Diode, Zener, UZ5.6BSB
DD09	23316309	Diode, Zener, UZ5.6BSB
DE50	23358493	Diode (LED), SPR54MVWFLMN, Red-Green
DL02	23118859	Diode, 1SS133
DL03	23115537	Diode, 1SS131
DS01	23118859	Diode, 1SS133
DT50	23358493	Diode (LED), SPR54MVWFLMN, Red-Green
DV01	23316327	Diode, Zener, UZ10BSB
DV02	23316327	Diode, Zener, UZ10BSB
DV03	23316327	Diode, Zener, UZ10BSB
DV04	23316327	Diode, Zener, UZ10BSB
DV05	23316327	Diode, Zener, UZ10BSB
DV06	23316327	Diode, Zener, UZ10BSB
DV07	23316327	Diode, Zener, UZ10BSB
DV08	23316327	Diode, Zener, UZ10BSB
DV09	23316327	Diode, Zener, UZ10BSB
DV10	23118859	Diode, 1SS133
DV11	23118859	Diode, 1SS133
DV12	23118859	Diode, 1SS133

MISCELLANEOUS

B270	23030937	Screw, BTBW3x12SBN
E912	23848729	Rubber Wedge

Location No.	Part No.	Description
⚠F801	23144867	Fuse, 4.0A
F801A	23165431	Holder, Fuse
F801B	23165431	Holder, Fuse
⚠F802	23144959	Fuse, 3.15A
F802A	23165431	Holder, Fuse
F802B	23165431	Holder, Fuse
⚠F803	23144872	Fuse, 1.25A
F803A	23165431	Holder, Fuse
F803B	23165431	Holder, Fuse
H005	23148199	Module, VIF Multi, MVCS32
H006	23148197	Module, D-COMB, SBX1792-01
H008	23148191	Module, NICAM/IGR/A.PRO, MPSE11
K901	23120303	Remote Sensor, IR-9109-K
L462A	23993696	Conver Board
L462B	23949390	Conver Board
L462D	23997346	Compensator, DY, TC-N
L462E	23997369	Compensator, DY, TC-P
P410A	23368519	Connector, 8P
P410B	23902751	Connector, 8P
P411A	23368519	Connector, 8P
P411B	23902751	Connector, 8P
P412A	23368517	Connector, 6P
P412B	23902749	Connector, 6P
P413A	23368519	Connector, 8P
P413B	23902751	Connector, 8P
P661	23363607	Headphone Jack, 3.5mm
⚠P801	23176897	Power Cord
P810	23164725	Plug, 2P
P900	23368234	Plug, 3P
PA00	23164560	Plug, 6P
PH13	23365546	Jack, 4P
PH20	23365763	Jack, Phono, 3P
PL01A	23367722	Connector, 13P
PL01B	23902650	Connector, 13P
PS01A	23367722	Connector, 13P
PS01B	23902650	Connector, 13P
PT01A	23368130	Connector, 10P
PT01B	23902213	Connector, 10P
PV01A	23902863	Connector, 20P
PV01B	23368520	Connector, 20P
PV02A	23902863	Connector, 20P
PV02B	23368520	Connector, 20P
PV10	23365768	Jack, 2S9P
⚠S801	23145434	Switch, Power, 2C2P
SA01	23344317	Switch, TACT
SA02	23344317	Switch, TACT
SA03	23344317	Switch, TACT
SA04	23344317	Switch, TACT
SA05	23344317	Switch, TACT
SA06	23344317	Switch, TACT
⚠SR82	23146935	Relay, AC120V
⚠V901A	23902824	Socket, CRT, 10P
V901C	23192818	Sticker, Z2013A
V901M	23102435	Magnet, Purity-Convergence, MAG-1091
W201	23250875	Delay Line, TRF2080
W661	23351110	Speaker, SPK-1377, 80x120mm, 8 ohm
W662	23351110	Speaker, SPK-1377, 80x120mm, 8 ohm
WT01	23250875	Delay Line, TRF2080
X401	23153721	Ceramic Resonator, 503kHz, TCR1023

Location No.	Part No.	Description
X502	23153979	Crystal, 4.43MHz
X503	23153961	Crystal, 3.58MHz
XA01	23153845	Ceramic Resonator, 4MHz, TCR1015
XM01	23153969	Crystal, 4MHz
ZC01	24094643	Ceramic Capacitor Block, 100pFx6, 50V
ZC02	24094643	Ceramic Capacitor Block, 100pFx6, 50V
ZC03	24094651	Capacitor Block, 100pFx4, 50V
ZP80	23144450	Protector, PRF2000
ZP81	23144451	Protector, PRF5000
ZP82	23144451	Protector, PRF5000
ZP84	23144451	Protector, PRF5000
ZZ01	23107849	Ceramic Video Trap, 4.43MHz, TCF1032
ZZ02	23107787	Ceramic Video Trap, 3.58MHz, TCF1044
PC BOARD ASSEMBLIES		
U002	23703834	Power/Def Board, PB5244
U003	23703893	Back Terminal Board, PB5278
U004	23702285	CRT Drive/SM Board, PB4039
U101	23703885	Signal Board, PB5271-1
U102	23703886	LTI Board, PB5271-2
U103	23703887	CTI Board, PB5271-3
U104	23703888	W-Amp Board, PB5271-4
PICTURE TUBE		
⚠V901	A5593339	Picture Tube, A68KZN696X(HT), SVC
TUNER		
H001	23321094	Tuner, VHF/UHF, EC425L
ACCESSORIES		
K902	23306077	Remote Hand Unit, CT-9777
Y101	23562306	Owner's Manual, English/Hongkong Chinese, 2979UH
Y123	23994860	One Sheet Manual

Location No.	Part No.	Description

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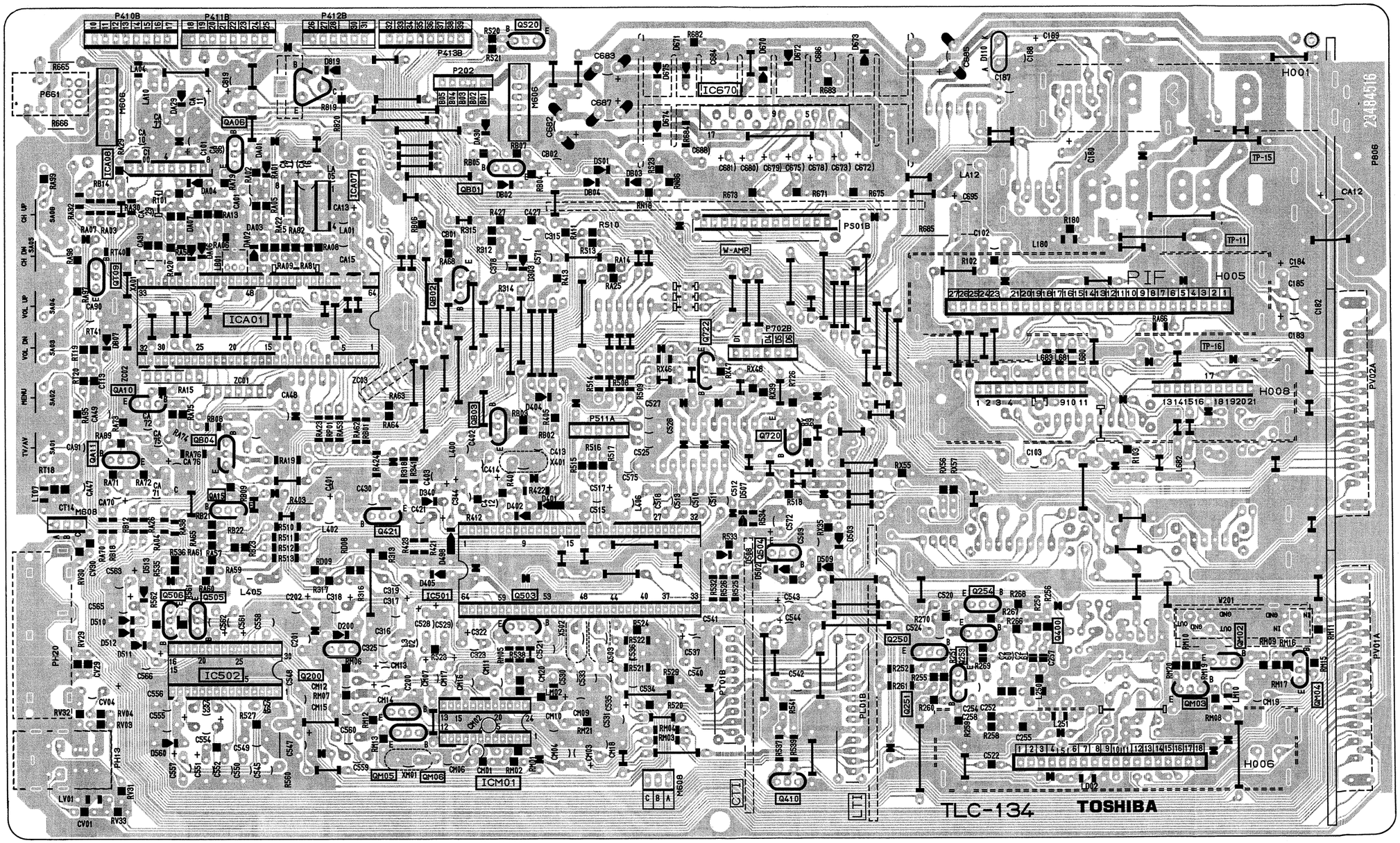
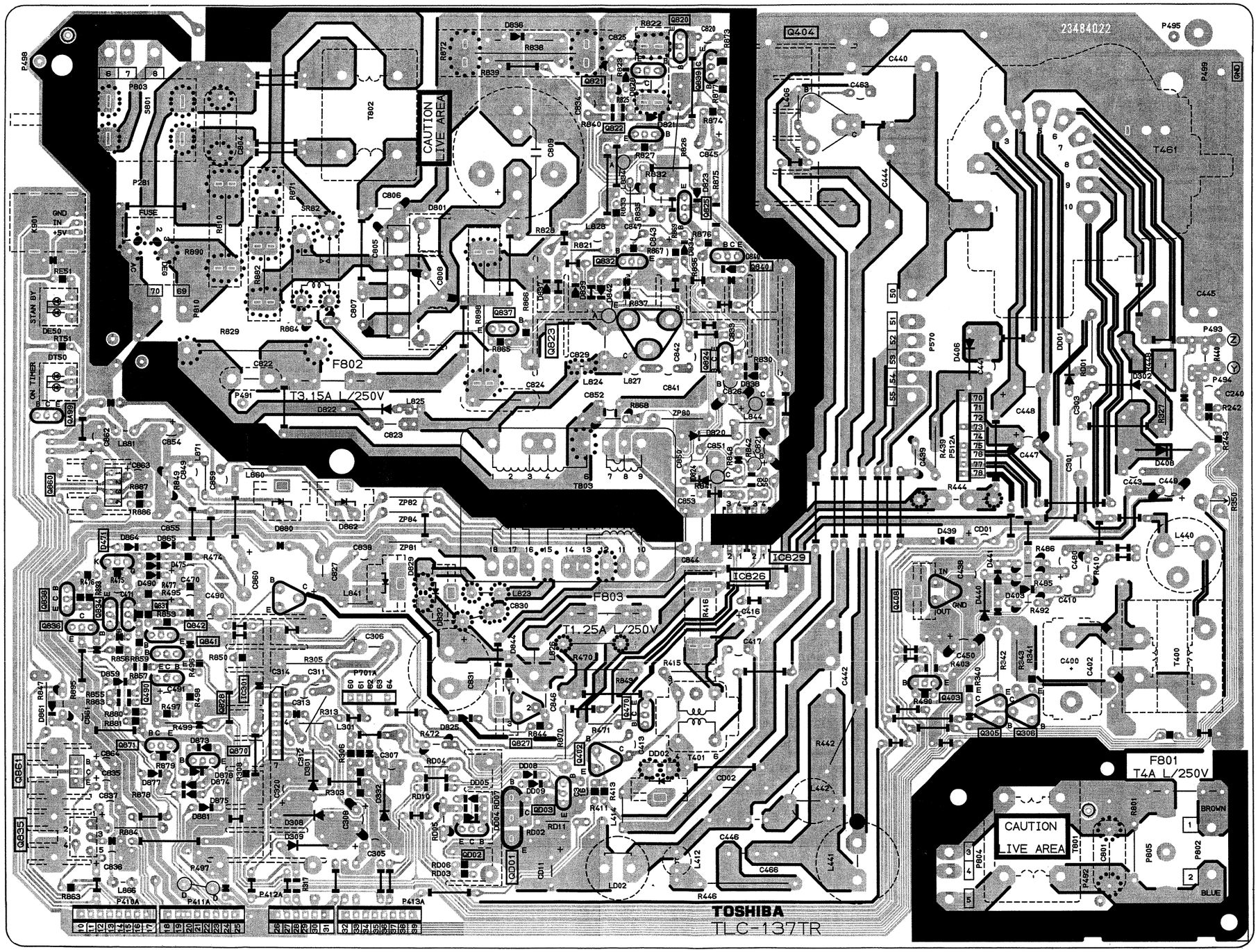
SIGNAL BOARD PB5271-1

BOTTOM (FOIL) SIDE



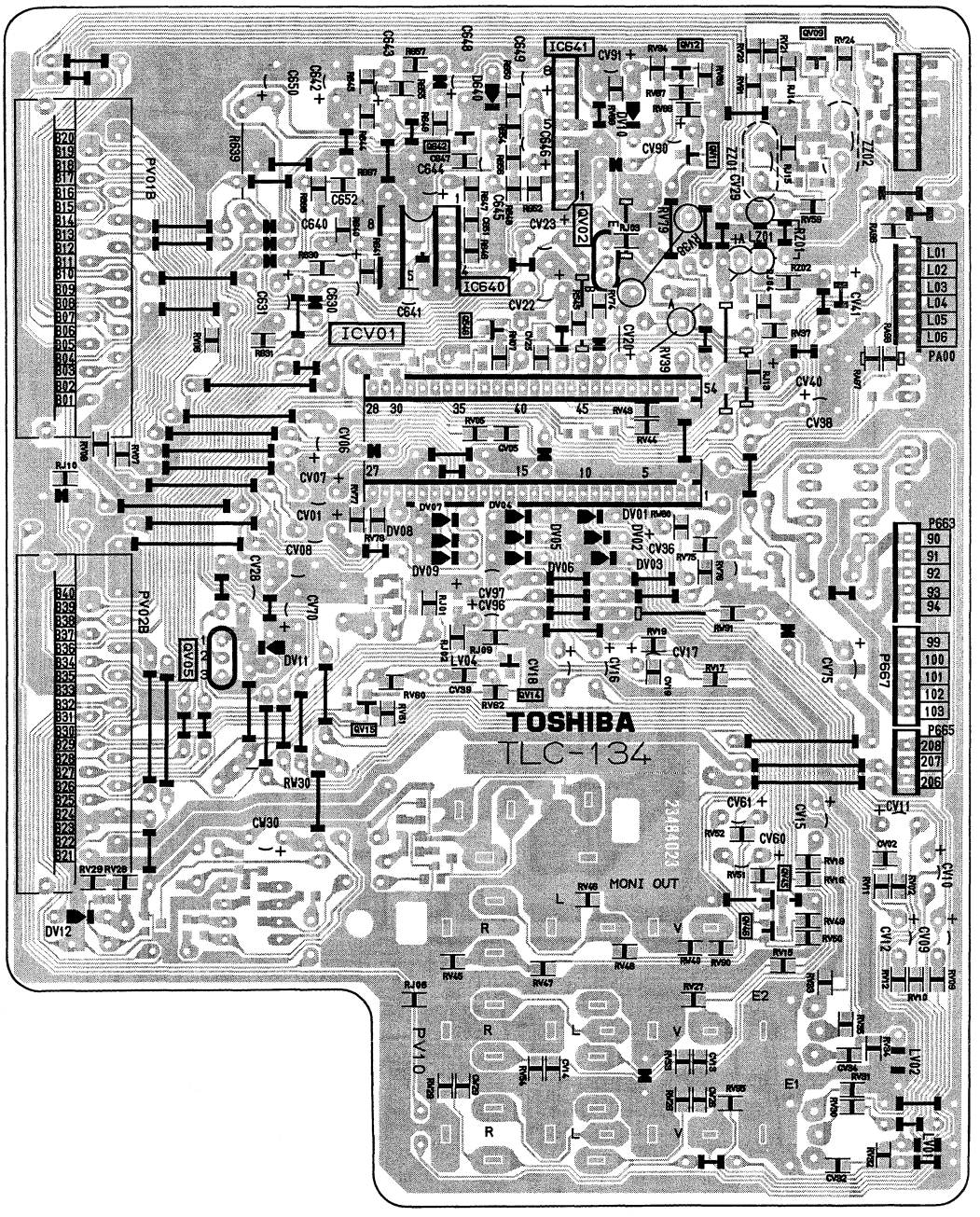
POWER/DEF BOARD PB5244

BOTTOM (FOIL) SIDE



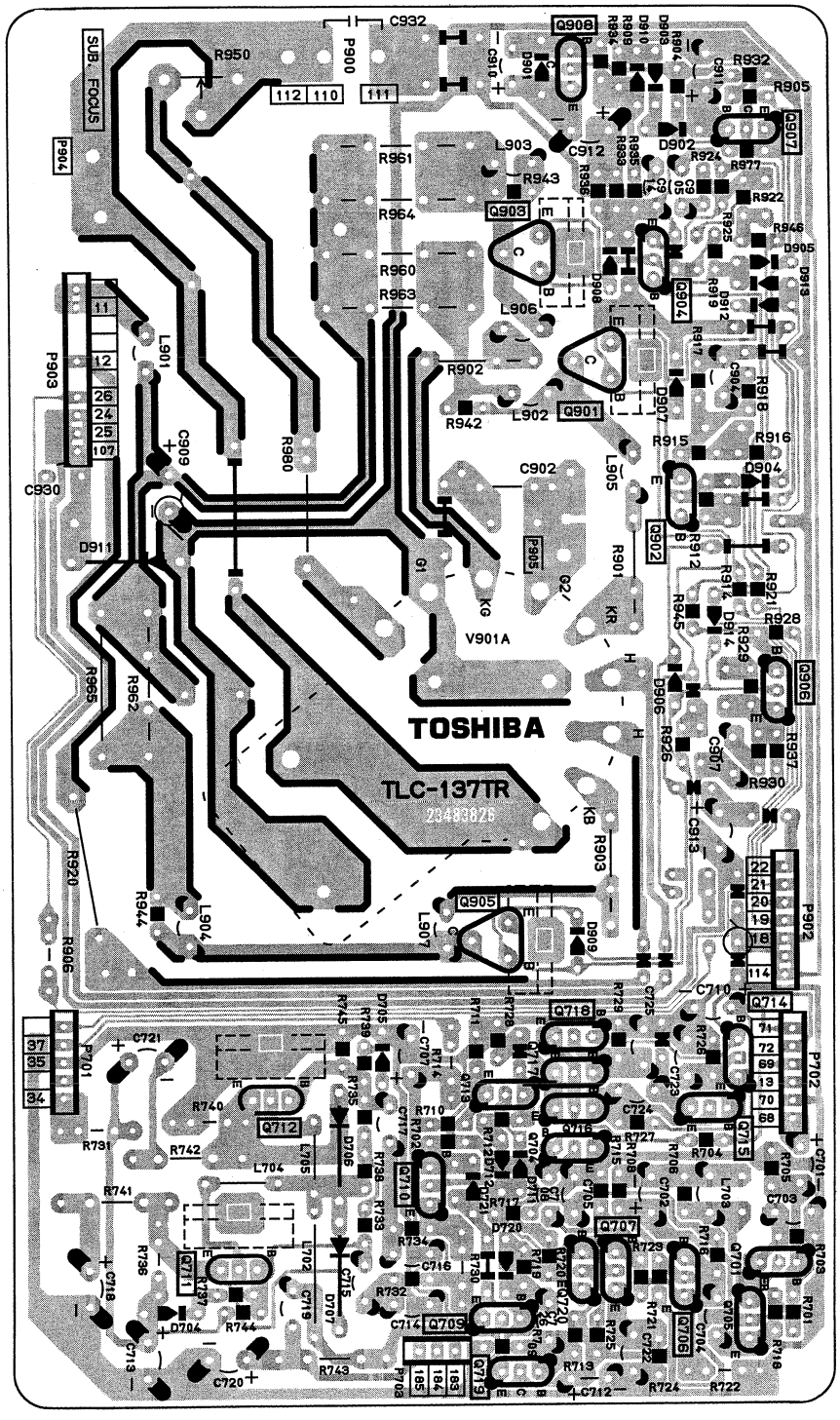
BACK TERMINAL BOARD PB5278

BOTTOM (FOIL) SIDE



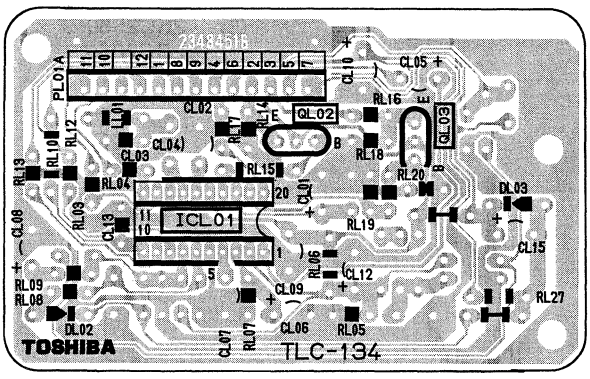
CRT DRIVE/SM BOARD PB4039

BOTTOM (FOIL) SIDE



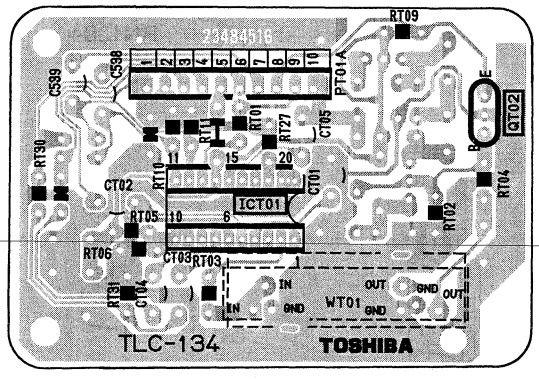
LTI BOARD PB5271-2

BOTTOM (FOIL) SIDE



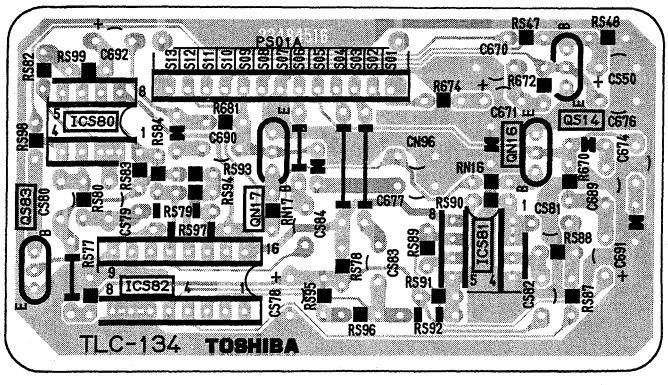
CTI BOARD PB5271-3

BOTTOM (FOIL) SIDE



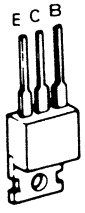
W-AMP BOARD PB5271-4

BOTTOM (FOIL) SIDE

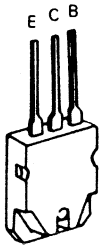


TERMINAL VIEW OF TRANSISTORS

① 2SC1569



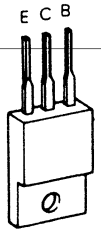
② 2SC3927(A)



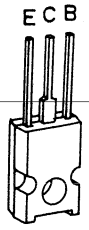
③ 2SC2580-C
2SC2655

④ 2SA933S
2SA1015-Y
2SA1320-Y
2SC752GTM
2SC1685-Q
2SC1740S
2SC1815-N
2SC1959-Y
2SC2120-Y
2SC2878-A

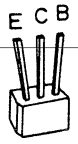
⑤ 2SB1186A
2SC3852
2SD2253



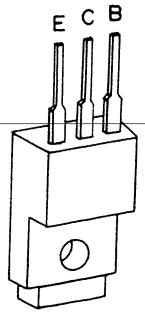
⑥ 2SC3619



⑦ RN1203
RN1204
RN1206
RN2004



⑧ 2SB1186A
2SD1763A



MEMO

MEMO

SCHEMATIC DIAGRAM MODEL: 2979UH (1/3)

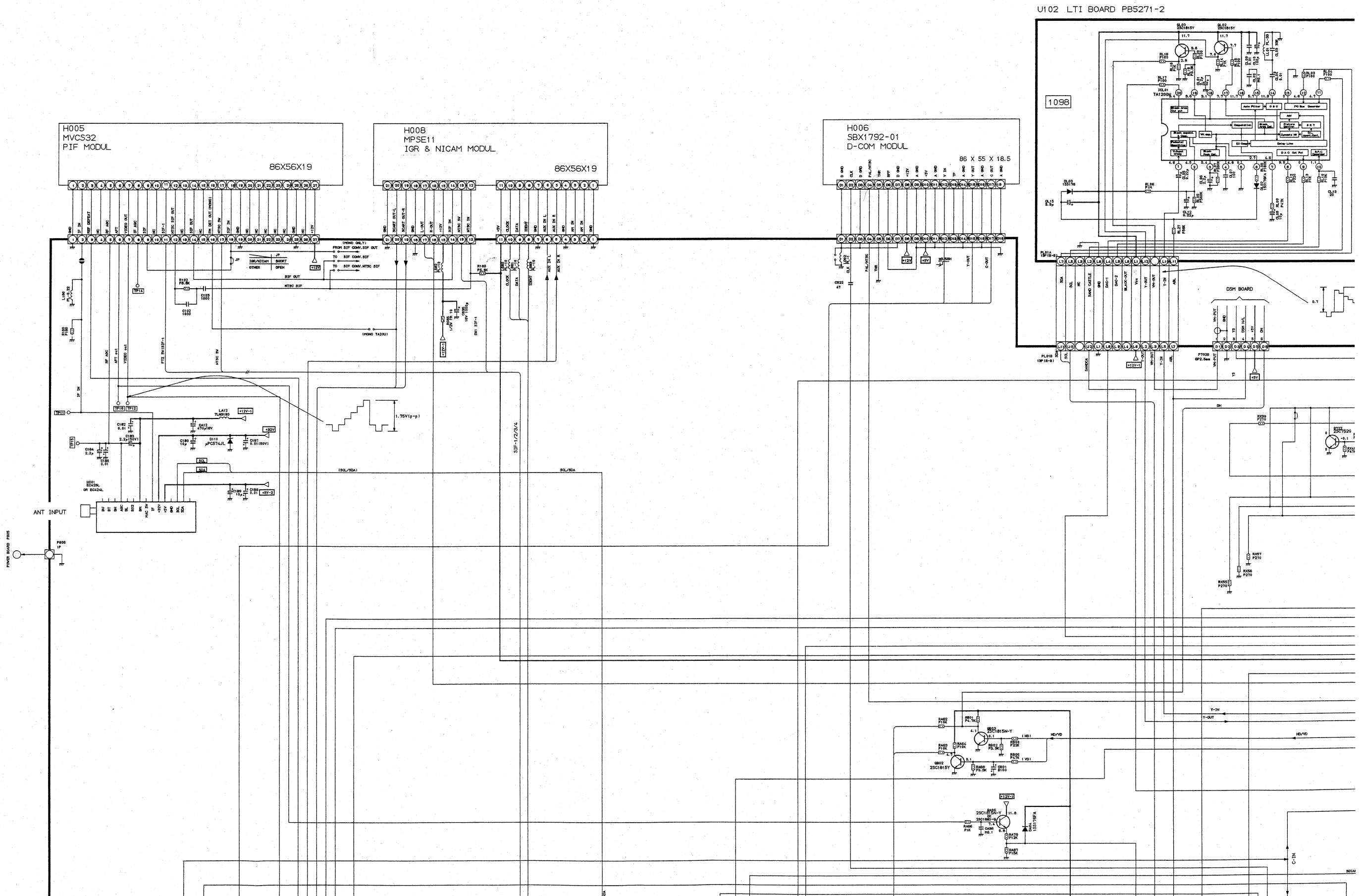
CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

1. D.C. resistance val
   gram. These are m
2. The circuits are sut
3. ● : Solder links.



U101 SIGNAL BOARD PB5271-1

FROM POWER

BACK-K TERMINAL

Front A\

SCL/SDA

SDA/SCL

HD/VD

C-IN

Y-IN

Y-OUT

1V SYNC

CXP85332-120
IC4A 01

NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ● : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

RESISTOR

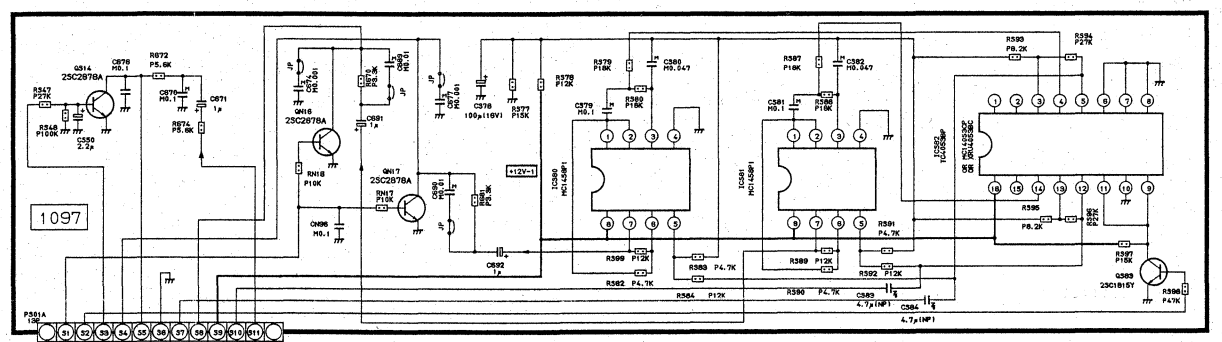
Table 1

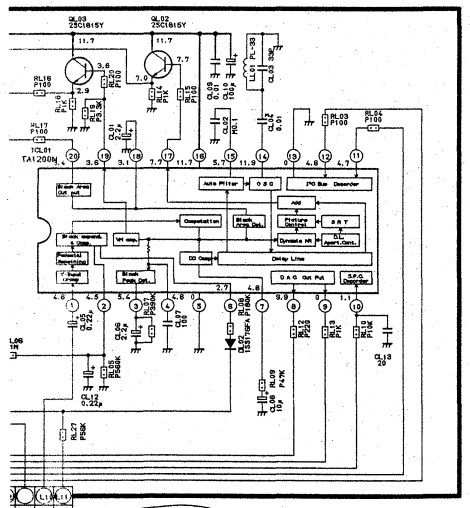
Type	Mark
Carbon Composition	S
Oxide Metal Film	R
Insulated Carbon Film	P
Cement	W
Variable Resistor	
Fusible Resistor	FR

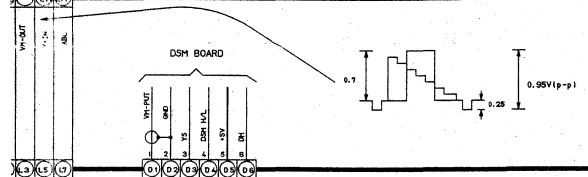
Table 2

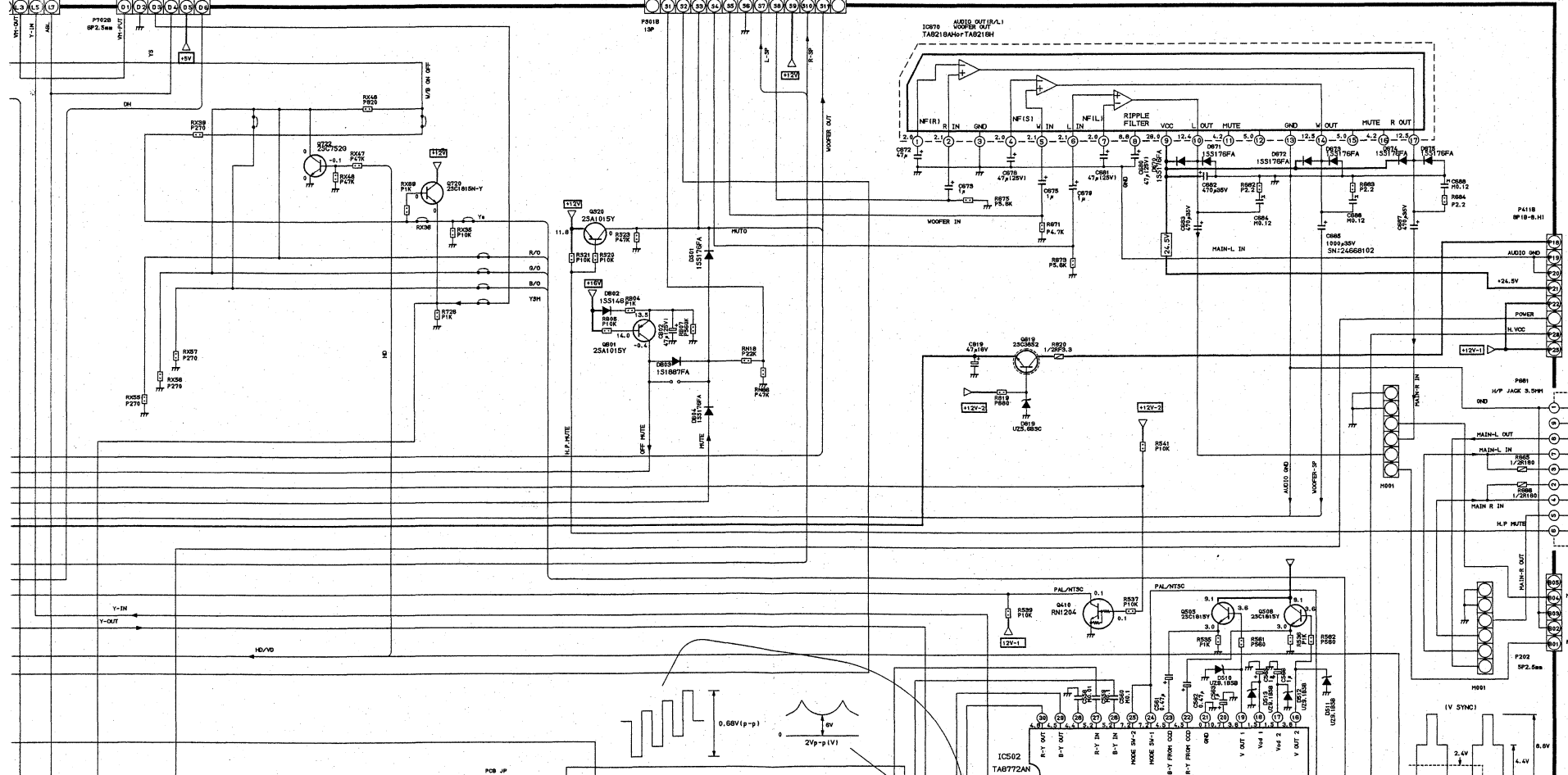
Watt	Mark	Watt	Mark
1/6 W		3 W	3
1/8 W		5 W	5
1/4 W		10 W	10
1/2 W		15 W	15
1 W	1	20 W	20
2 W	2	25 W	25

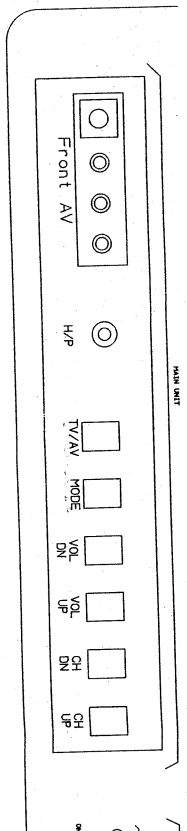
U104 W-AMP BOARD PB5271-4

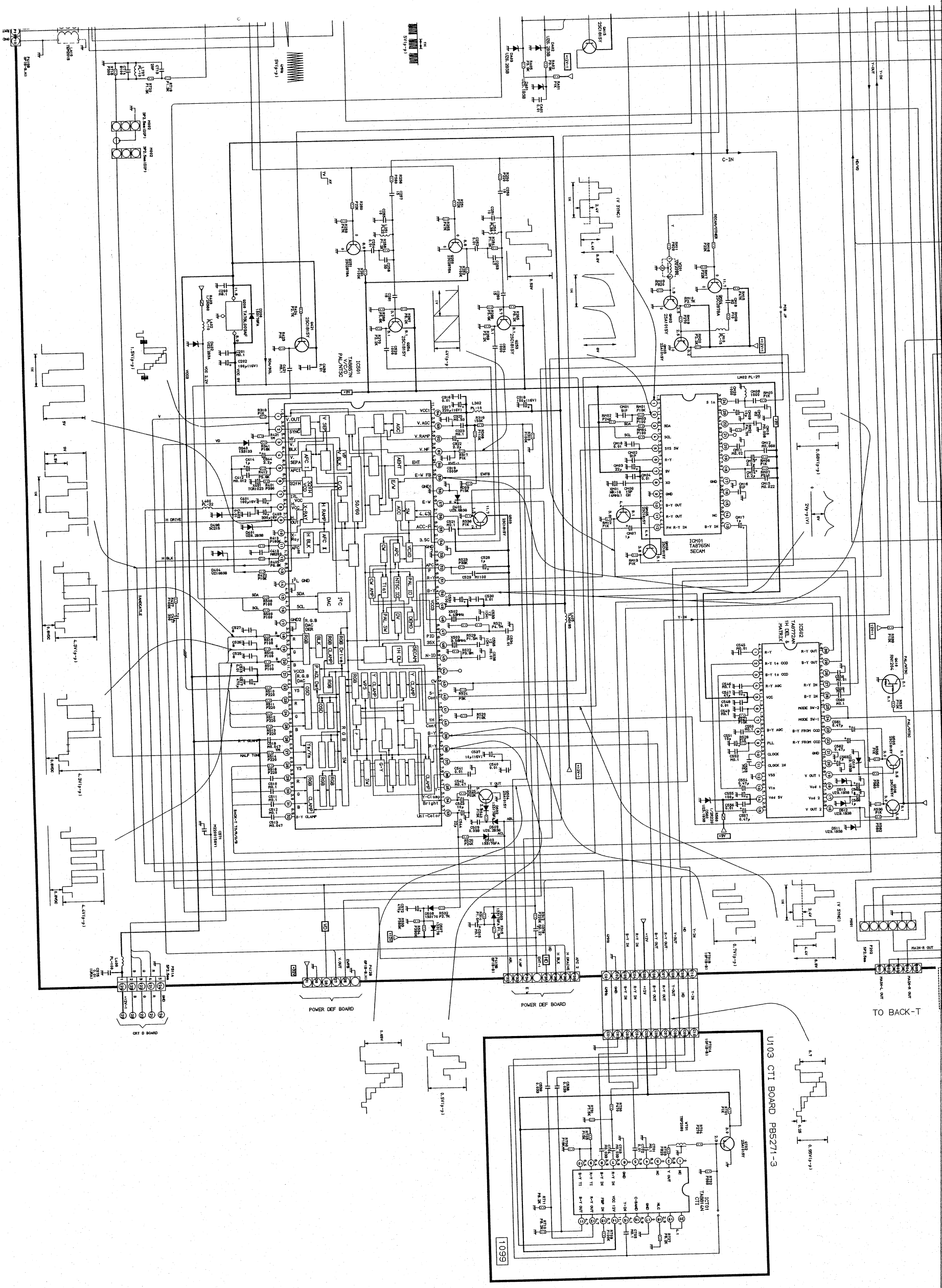






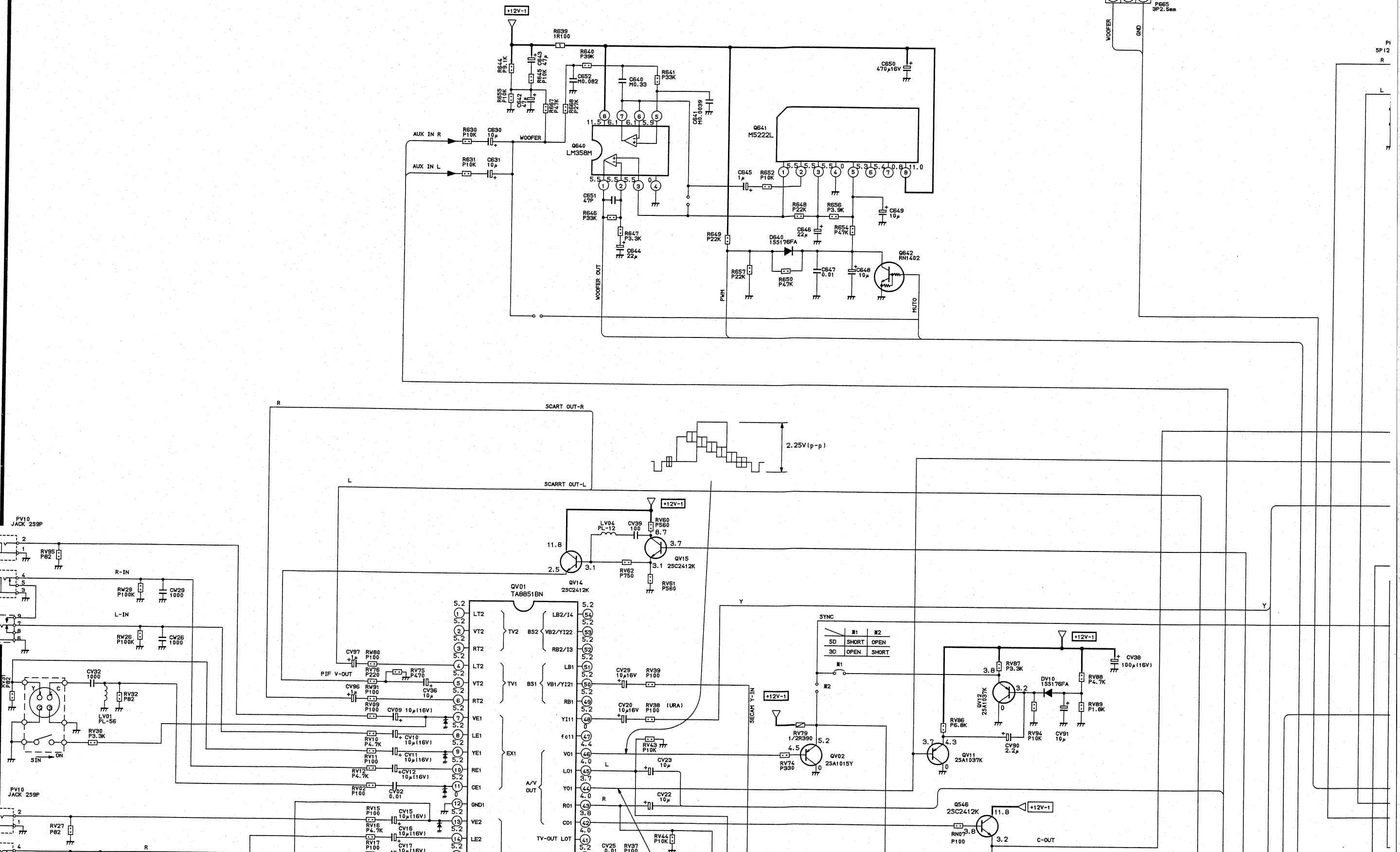



Front AV
H/P
TV/AV MODE
VOL DN
VOL UP
CH DN
CH UP
LED
IR-AMP
POWER SW
MAIN UNIT
POWER UNIT


IC501
TA8887N
V/C/D
PAL/NTSC
ICM01
TA8765N
SECAM
IC502
TA8772AN
1H DEL &
MATRIX
IC701
TA8814N
CTI
U103 CTI BOARD PB5271-3
1099
POWER DEF BOARD
POWER DEF BOARD
CRT D BOARD
TO BACK-T
C-IN
Y-IN
Y-OUT
MAIN-L OUT
MAIN-R OUT

SCHEMATIC DIAGRAM MODEL: 2979UH (2/3)

U003 BACK TERMNAL BOARD PB5278



MONI OUT

S VIDEO (REAR) E3

WHT RED YEL

PV10 JACK 2SP

MONI L-OUT

MONI R-OUT

+12V

+9V

SIN ON

SECAM Y-IN

JP

2.1V(p-p)

C-OUT

OFF MUTE EXT MUTE

TA78L009AP

1SS176FA

2SC2412K

2SA1037K

2SC3328B

UZ1085B

PIF V-OUT

TV-OUT ROT

TV-OUT LOT

A/V OUT

EX1 EX2 EX3 BS1 TV1

PIP OUT

CRT. D/DSM PB4039

A430 WOOFER BOX
WOOFER SP
M665 2P2.5mm
M666 2P2.5mm
GLY
BLK
W660 SPK-1352
P663 5P(2.5mm)
W661 SPK-1359
W662 SPK-1359
FRONT SP
R
L
C-OUT
Y-OUT
+12V-1
Y
C
V
BUS OFF
REF DEFEAT
EXT MUTE
TV SYNC
SYNC
E3-L
E3-R
E3-Y/V
E3-C
E3-Y
PV01B (20P B-B)
AUDIO GND
MAIN-L OUT
MAIN-R OUT
MAIN
4.3V(p-p)
2.2V
0.8V
4.9V(p-p)
M901
P902 7P(2.5mm)
TO MAIN (P511A)
TP-46R
TP-46G
TP-46B
TP-47R
TP-47G
TP-47B
RED CUT OFF
GREEN CUT OFF
BLUE CUT OFF
GREEN DRIVE
BLUE DRIVE
Q901 2SC4544
Q902 2SC1815Y
Q903 2SC4544
Q904 2SC1815Y
Q905 2SC4544
Q906 2SC1815Y
Q907 2SA562TMY
Q908 2SC2120Y
D907 1SS176
D908 1SS176
D909 1SS176
D904 1SS176
D905 1SS176
D906 1SS176
D910 1SS176
D912 1SS176
D913 1SS176
D914 1SS176
D901 1SS176
P900 3P
P905 (PC-39μ (PC-10μ))
L902 100μ
L903 100μ
L904 100μ
L906 39μ
L907 39μ
C932 500V 100 (URA)
V901 A68KZN 696XHT
SN:
G4
EV
FV
R950 20M
V901A CRT SOCKET
C902 2KV4700
C930 500V100
R920 2RF2.0
(HEATER)
D911 1S1834
(+200V)
L901 100μ
C909 250V22μ 250V4.7μ
R906 1/2R100
P903 10P(2.5mm)
M902
POWER
1 HEATER GND
3 HEATER GND
2 HEATER GND
6 HEATER
5 NC
9 +200V
10 +200V
7 NC
4 H.BLK
8 NC
T461 C400
5V
12V
P701 5P(2.5mm)
125V
13.9V
POWER BOARD
M702
P702 6P(2.5mm)
MAIN BOARD
M701
VM
GND
NC
Ys
+5V-2
HD
R731 1/2RJ330
R714 1/2R120
C707 16V47μ
Q705 2SC2712Y
C704 0.0082M
R718 2.2K
Q706 2SC2712Y
R721 1K
R725 1.8K
Q720 2SC1815Y
R719 3.9K
C726 1000P
D720 1SS176
R720 3.9K
R713 39K
R709 56K
Q719 2SC2712Y
C712 16V47μ
CONTROL
Q709 2SC1815Y
R732 82
C715 500VFJ0.0047
C714 50VFJ100
D721 1SS176
R730 1/2RJ10
R722 1/2PJ470
C722 560P
R724 47
Q707 2SC3437Y
R708 1K
C702 16V100μ
R706 1K
R701 15K
L703 PL-47
Q701 2SC2712Y
C701 16V47μ
R705 2.2K
R703 470
C703 82
R716 27K
R717 33K
C705 50VFJ0.01
R715 22K
R702 2.2K
D711 HSM211C
D712 HSM211C
R710 470
Q713 2SC2712Y
R712 22
R711 330
Q710 2SA1015Y CONTROL
C708 0.01
R704 100
Q704 2SC3437Y
C710 16V10μ
Q714 RN2204
Q715 RN1204
R727 27K
Q716 2SC2712Y
Q717 2SC2712Y
R726 47K
C723 0.001
C724 120
R728 2.2K
Q718 RN2204
C725
R736 1/2RJ51
C713 160VCW10μ
D704 HSM221C
R737 1.5K
R744 1.2K
C721 160VCW47μ
R742 1/2RJ2.7
R741 1/2RJ2.7
C718 160VCW47μ
Q711 2SA1306-Y
OUT
D707 TVR-2D
R733 68K
L704 TEM2011
R738 12K
L705 TEM2011
R735 68K
C717 500VFJ0.0047
R734 82
C716 50PJ100
R739 1.5K
R745 1.2K
D705 HSM221C
D706 TVR-2D
L702 HCS-035
R740 1/2RJ51
Q712 2SC3298A-Y
OUT
C719 500VFJ56
C720 160VCW10μ
R743 2RJ220
R901 1/2W560
R902 1/2W560
R903 1/2W560

ADJUST

MAIN

PV01B (20P B-B)

PV02B (20P B-B)

AUDIO GND
MAIN-L OUT
MAIN-R OUT
WOOFER SP
REF DEFEAT
PIF V-OUT
AUX IN R
AUX IN L
SCART OUT-L
SCART OUT-R
SCART OUT-R
VARI OUT-L
VARI OUT-R
GND
MUTO
WOOFER OUT
OFF MUTE
HILL TOP ON/OFF
PWM
SCL
SDA

BUS OFF
SCL
SDA
SCL
SDA
GND

R496 P1K
R497 P10
R498 P100

P400 6P 2.5

+9V

DV11 1SS176FA

GV05 TA78L009AP

CV01 0.1
CV70 100μ16V

V901M MAG1081

CV10 16V10μ

Q714 RN2204
Q715 RN1204
Q716 2SC2712Y
Q717 2SC2712
Q718 RN2204
Q704 2SC3437Y
Q708 0.01
Q713 2SC2712Y
Q705 HSM221C
Q710 2SA1015Y
Q712 2SC2298A-Y
Q720 60VCW10μ
Q723 0.001
Q724 2.2K
Q728 47K
Q729 100K
Q727 2SC2712

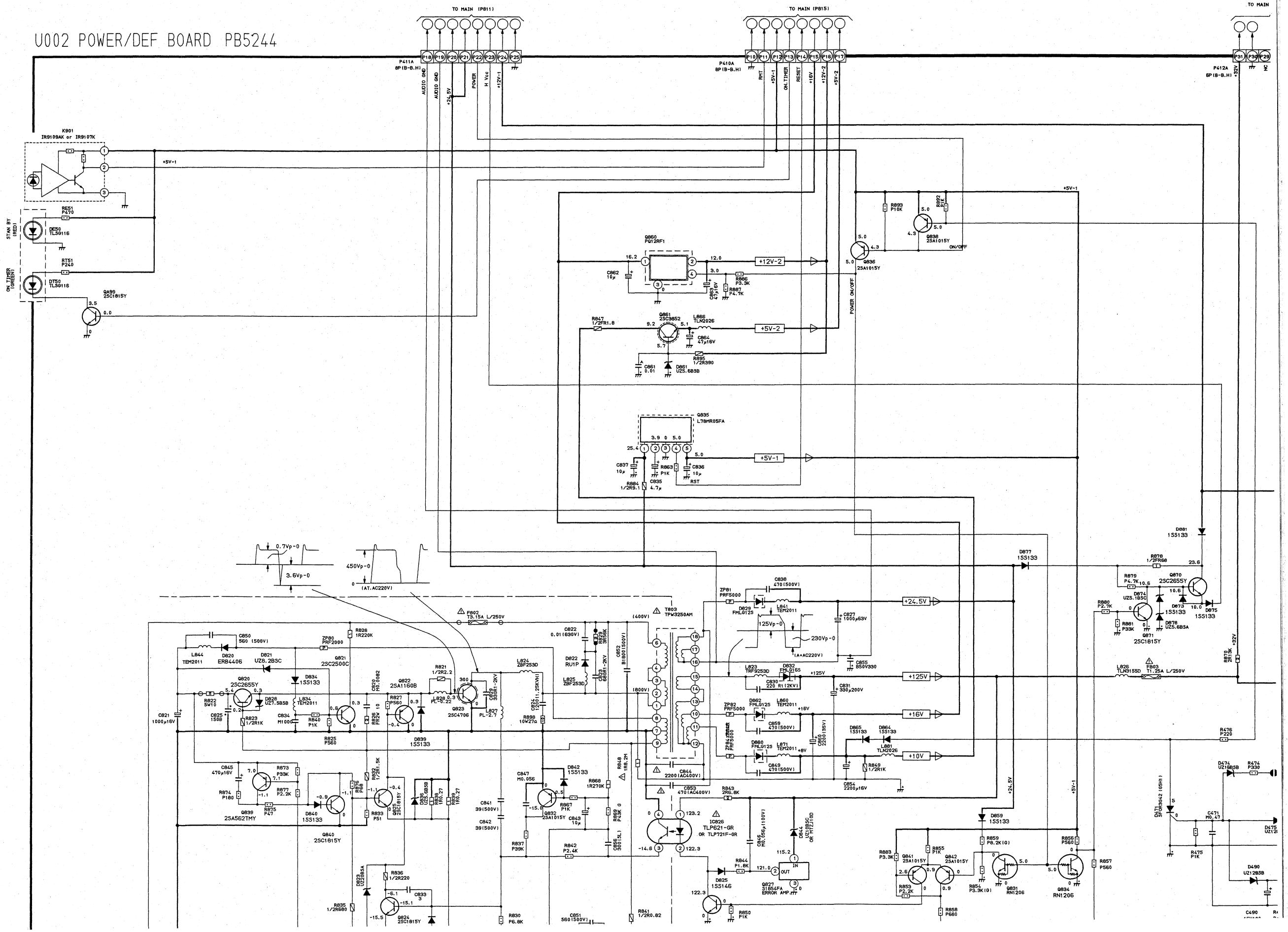
R704 100
R710 470
R711 330
R712 22
R727 2.2K
R728 2.2K
R739 1.5K
R743 2R2J220
R745 1.2K
R746 2.2K
R748 82
R749 2.2K
R750 2.2K

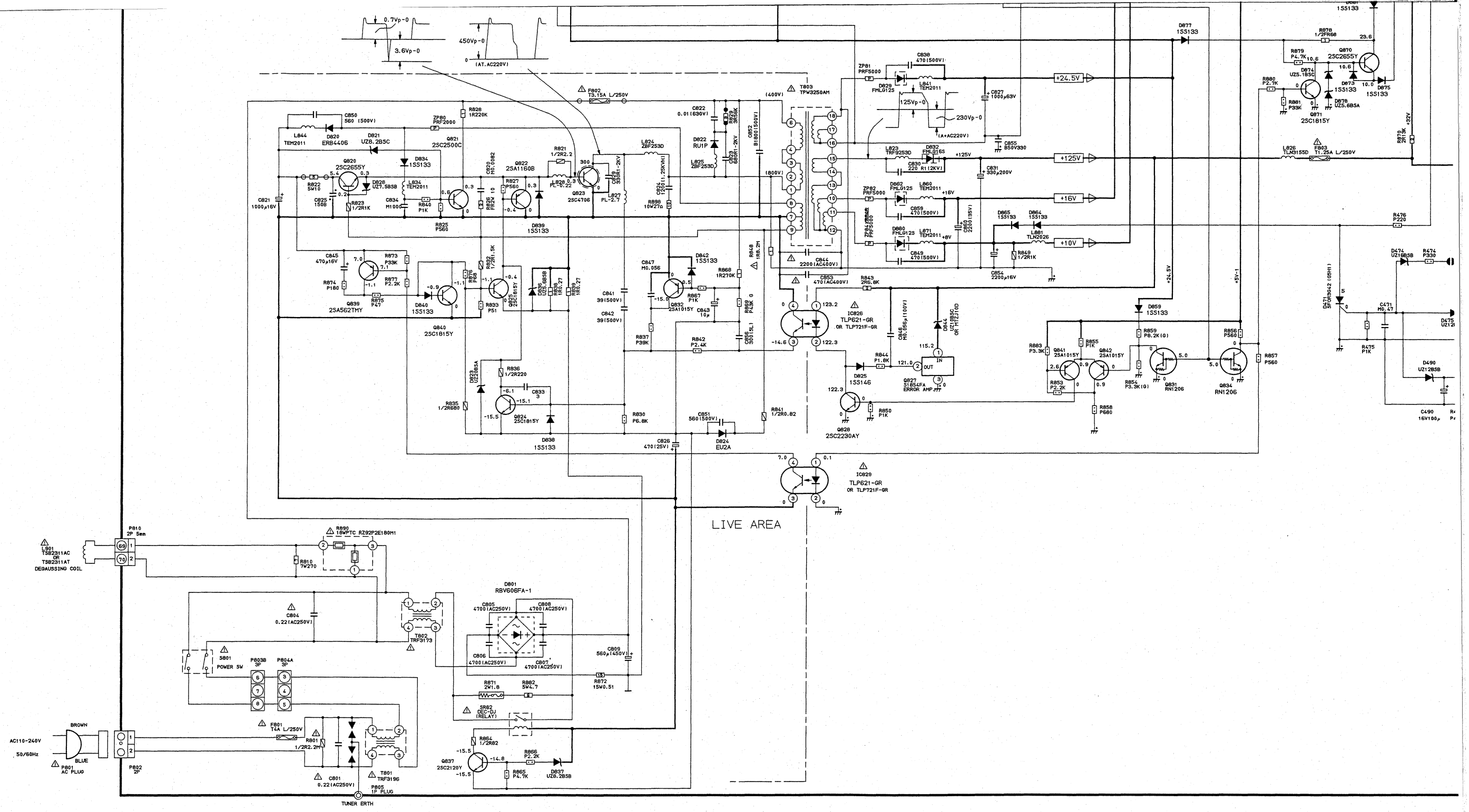
C708 0.01
C719 500VFJ56
C720 60VCW10μ
C724 120
C725 100
C739 50PJ100
C746 50VFJ0.01

D711 HSM221C
D712 HSM221C

1/2RJ51
1/2RJ51

SCHEMATIC DIAGRAM MODEL: 2979UH (3/3)


U002 POWER/DEF BOARD PB5244
TO MAIN (P811)
TO MAIN (P815)
TO MAIN
P411A 8P(B-B.H)
P410A 8P(B-B.H1)
P412A 6P(B-B.H1)
AUDIO GND
AUDIO GND
+24.5V
POWER
H Vcc
+12V-1
RMT
+5V-1
ON-TIMER
RESET
+16V
+12V-2
+5V-2
+32V
NC
K901
IR9109AK or IR9107K
+5V-1
STAN BY (RED)
ON-TIMER (GREEN)
RE51 P470
DE50 TLSG116
RT51 P240
DT50 TLSG116
Q499 2SC1815Y
3.5
0.0
0
0.7Vp-0
3.6Vp-0
450Vp-0
(AT.AC220V)
F802 T3.15A L/250V
T803 TPW3250AM
(400V)
(800V)
C822 0.01(630V)
R823 3R3K
C852 B1800(500V)
D822 RU1P
L825 ZBF2530
C823 6800P-2KV
L824 ZBF2530
L823 TRF3253D
D832 FHL016S
+125V
C830 220 R1(2KV)
C831 330μ/200V
C827 1000μ/63V
C855 850V330
125Vp-0
230Vp-0
(A+AC220V)
ZP81 PRF5000
D829 FHLG12S
L841 TEM2011
C838 470(500V)
ZP82 PRF5000
D862 FHLG12S
L860 TEM2011
+16V
C859 470(500V)
ZP83 PRF5000
D860 FHLG12S
L871 TEM2011
+10V
C849 470(500V)
C854 2200μ/16V
D865 1SS133
D864 1SS133
L881 TLN2026
R849 1/2R1K
C853 470(AC400V)
C844 2200(AC400V)
R848 R8.2M
R849 2R6.8K
C826 2200(35V)
C850 S60 (500V)
ZP80 PRF2000
R826 1R220K
L844 TEM2011
D820 ERB4406
D821 UZ8.2B5C
Q821 2SC2500C
D834 1SS133
Q820 2SC2655Y
R822 5W10
C825 1568
R823 1/2R1K
D826 UZ7.5B5B
L834 TEM2011
C834 M1000
R840 P1K
C821 1000μ/16V
R825 P560
C870 M0.0082
R827 P560
Q822 2SA1160B
R821 1/2R2.2
PL-0.22
L826 0.3
L827 PL-2.7
L824 150(11.25KVH)
R898 10W27Ω
D839 1SS133
Q823 2SC4706
300
3300P-2KV
C845 470μ/16V
R873 P33K
R874 P180
R877 P2.2K
R875 P47
Q839 2SA562TMY
D840 1SS133
Q840 2SC1815Y
R876 P1.5K
R878 P1K
R833 P51
Q825 2SC1815Y
D836 UZ5.6B3B
R834 1R0.27
R835 1R0.27
R837 1R0.27
C841 39(500V)
C842 39(500V)
D842 1SS133
R868 1R270K
C847 M0.056
Q832 2SA1015Y
R967 P1K
C843 10μ
R842 P2.4K
R837 P39K
C856 3300P(AL)
R838 P4.7K
R839 P4.7K
R840 P0
R830 P6.8K
C851 560(500V)
R841 1/2R0.82
D823 UZ6.8B5A
R836 1/2R220
C833 3
Q824 2SC1815Y
R835 1/2R680
-15.5
-6.1
-15.1
-14.6
-15.0
-1.1
-0.4
-0.9
-1.1
-0.4
-0.9
-1.1
-0.4
-0.5
-0.5
-0.4
-0.4
-0.4


0.7Vp-0
3.6Vp-0
450Vp-0
(AT.AC220V)
LIVE AREA
TLP621-GR OR TLP721F-GR
P810 2P Sem
L901 TSB2311AC OR TSB2311AT DEGAUSSING COIL
P801 AC PLUG
BROWN
BLUE
AC110-240V
50/60Hz
P802 2P
S801 POWER SW
P803B 3P
P804A 3P
P805 1P PLUG
TUNER ERTH
D801 RBV606FA-1
T801 TRF3196
T802 TRF3173
SR02 DEC-5J (RELAY)
+24.5V
+125V
+16V
+10V
+32V
+5V-1
+24.5V

TO MAIN (P815)

P410A 8P(B-B.H)

P10 P11 P12 P13 P14 P15 P16 P17

RMT | +5V-1 | ON TIMER | RESET | +16V | +12V-2 | +5V-2

TO MAIN BOARD (P814)

P412A 6P(B-B.H)

P31 P30 P29 P28 P27 P26

+32V | NC | VD | V IN | EV

TO MAIN BOARD (P812)

P413A 6P(B-B.H)

P39 P38 P37 P36 P35 P34 P33 P32

AFC-II | H DRIVE | H BLK | HD | EHT-1 | EHTB | V.NF | ABL

1Vp-p(V) 1V DC=0

50(V) DC=0

IC301 TA8427K

OUTPUT | DRIVE | PULSE AMP | Vcc

0 | 14.9 | 27.8 | 8.9 | 0.7 | 27.4 | 0.8

C313 M0.22(100V) R313 1/2R1.5 L301 TEM2011

R307 P270K C305 1μ C307 0.047μ(100V) C306 3300μ25V

R308 P56K R336 2R270 R304 P51K R303 P27K R305 1R0.5

D332 SC570A

C311 150(500V) C314 M0.056 R308 P1K

C308 220μ35V D309 ERB1202RK D301 EU2A R309 1R220

D308 ERB1202RK

C310 M0.01 C320 100μ(35V)

28Vp-p(V) 28V R317 P1K

P494 P493 R249 P3.6K R242 P15K R440 P4.7K C240 0.47μ EHT-1 Z

VERT COIL

P570 5mmGP

M570 L462 TDY629DA 3N23231043

HOR.COIL

+27V

R340 P4.7K R342 1R270 Q305 2SB1186FA R350 50KB R344 P100 Q306 2SD1763A R341 P3.9K R343 1R360

L440 TLN2110 T400 TLN2168 C400 1000(15KV) C402 180P(12KV)(R1)

150Vp-p(H)

+27V

Q403 2SC1815Y R492 1/2R10K R403 P1K R490 P1.8K

D441 UZ24B5B R488 1/2R6.2K R485 1/2R1.5K D440 EU2A C480 0.47μ(15KV)

C410 5600(100V) R410 1/2R4.7K D493 UZ12B5B

H.V.

MUTE | +12V-1 | +27V

Q408 PC2412HF C450 470μ(16V) C449 1000μ25V C443 220(500V) R448 1R0.33 D408 RU4Z C436 M0.47 C303 220(500V) R327 2R4.7 D302 EU-2A or ERB44-06 C310 2200μ(35V) C448 33μ(160V)

T461 TFB4118BD OR TFB4118AN

FOCUS | SCREEN

DOF | FOCUS | SCREEN

TO CRT/D

R444 1R0.39

P512A 9P(2.5mm)

1 H.BLK | 2 GND | 3 GND | 4 GND | 5 NC | 6 HEATER | 7 NC | 8 NC | 9 +200V

P512 (P512)

HEATER

C441 220(500V) D406 EU2A C447 33μ(250V) +200V

C439 M0.01(630V) R439 1/2R33K AFC-II D439 UZ12B5B

D401 1/2FR15 D401 TVR-1B

150Vp-p(H)

R470 1R0.39 R471 1/2R100 R472 1/2P39K Q470 2SA1320

R476 P220 D476 UZ16B5B R474 P330 C471 M0.47 D475 UZ12B5B C470 22μ(16V) R477 P15K R475 P1K

D490 UZ12B5B R496 P1.5K Q490 2SA1015Y R498 P3.9K C490 16V100μ R495 P47K R497 P5.6K C491 16V100μ R499 1/2R1

+27V

0.8V DC=0 12V 1H

3.0Vp-P(V) 0 10V

L441 TLN2144 R442 1R1K

Q404 2SD2253FA HOR OUT C440 800(160V) C453 2200 L406 TEM2011 C442 0.33(400V) L426 TLN1083 C466 T0.33(200V) L442 2SR150 C446 0.1(400V) L443 TLN1090 or TLN3109 L444 TEM2011 C444 0.1(400V) C445 T0.056(200V) D402 RBO2-06 D403 RBO2-06 C410 T0.015(630V) C401 0.1(400V) D401 TVR-1B

RD07 P27K RD11 1/4R3.9K RD05 1/2R3.3K RD06 1K RD08 P56K RD09 1K RD02 1R4.7 D004 1S3133 D009 UZ5.6B5B D008 UZ5.6B5B D005 UZ12B5A Q001 2SB668 Q002 2SC1815Y OR 2SC1685-Q Q003 2SC1815N-Y OR 2SC1685-Q RD04 1/2R1K R418 595.1K

T401 TLN1083

85V

D881 1SS133 D877 1SS133 D859 1SS133

R878 1/2FR68 23.6 R879 P4.7K 10.6 Q870 2SC2655Y 10.6 D874 UZ5.1B3C 0 D873 1SS133 10.0 D875 1SS133 R880 P2.7K R881 P33K Q871 2SC1815Y D876 UZ5.6B5A

R879 P4.7K +32V

L826 TLN2155D F803 T1.25A L/250V

ZP81 PRF5000 C838 470(500V) D829 FMLG125 L841 TEM2011 C827 1000μ63V 125Vp-0 230Vp-0 (A+AC220V)

ZP82 PRF5000 D862 FMLG125 L860 TEM2011 C859 470(500V) D880 FMLG125 L871 TEM2011 C849 470(500V) C844 0.01(AC400V) C853 470(AC400V) C854 2200μ16V D865 1SS133 D864 1SS133 L881 TLN2026 C860 2200(35V) R849 1/2R1K

ZP83 PRF5000 L823 TNF9253D D832 FML-G16S C830 220 RI(2KV) C831 330μ200V

R843 2R6.8K

+24.5V | +125V | +16V | +10V | +5V-1 | +12V-2 | +5V-2

POWER ON/OFF

ON/OFF

Q836 2SA1015Y R893 P10K R892 P1K

Q838 2SA1015Y

C836 10μ RST Q835 L78HR05FA

C863 47μ16V R886 P3.9K R887 P4.7K

L865 TLN2026 C864 47μ16V R895 1/2R390 D861 UZ5.6B5B

IC826 TLP621-GR OR TLP721F-GR C846 M0.056(100V) D844 UZ16B5C OR MTZJ16D

R844 P1.8K D825 1SS146 Q827 2SB54FA ERROR AMP.

Q828 2SC2230AY R850 P1K

IC829 TLP621-GR OR TLP721F-GR

R853 P2.2K R854 P3.3K(G) R859 P8.2K(G) R855 P1K R856 P560 R858 P680 R857 P560

Q841 2SA1015Y Q842 2SA1015Y Q831 RN1206 Q834 RN1206

P704A
SP 2.5
MUTE(+12V)
TO VSM
(P701)
+12SV
+27V
+12V
+5V-1
+5V-2
+24.5V
+16V
+10V
-15V
-27V
H
V
H BLK
H DRIVE
E/W
E/W
DC-0
85Vp-p(H)
0.7Vp-p
0.7Vp-p(H)
7.0Vp-p(V)
220Vp-p(H)
150Vp-p(H)
3.0Vp-p(V)
0.8V
1H
12V
10V
85V
-220V
-15V
TO CRT/D
SCREEN
FOCUS
DEF
H.BLK
HEATER
HOR. COIL
DEGAUSS
POWER ON/OFF
P512A
SP12.5mm
P512
P570
P704
P701
MS12
MS70
MS71
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SPECIFICATIONS

Input Power Rating: 197 W, AC 110 ~ 245 V, 50/60 Hz

Aerial Input Impedance: 75 ohm unbalanced type for VHF, UHF and CATV

Television System and Channels:

System	VHF	UHF	CATV
PAL B/G	2 ~ 12	21 ~ 69	X ~ Z + 2, S1 ~ S41
SECAM B/G	2 ~ 12	21 ~ 69	X ~ Z + 2, S1 ~ S41
PAL D/K	1 ~ 12	13 ~ 57	Z-1 ~ Z-35
SECAM D/K	1 ~ 12	21 ~ 69	–
PAL I	–	21 ~ 69	–
NTSC M US	2 ~ 13	14 ~ 79	A-6 ~ A-1, A ~ W, AA ~ BBB
NTSC M JAPAN	1 ~ 12	13 ~ 62	M1 ~ M10, S1 ~ S41

Intermediate Frequencies:
Picture I-F carrier frequency ..... 38.0 MHz
Sound I-F carrier frequency ..... 33.5 MHz (4.5 MHz M)
32.5 MHz (5.5 MHz B/G)
32.0 MHz (6.0 MHz I)
31.5 MHz (6.5 MHz D/K)

Colour System: PAL / SECAM / 4.43 NTSC / 3.58 NTSC / 60 Hz PAL / 50 Hz NTSC

Picture Tube: 29 inches, 108° deflection, 68 cm (measured on diagonal of viewble picture area)

Sound Output: Main 10 W + 10 W, Woofer 13 W

Speakers: 120 mm x 80 mm, 2 pcs (Main) 100 mm (Woofer)

Aux. Terminals: Headphone Jack, S-VIDEO socket, VIDEO/AUDIO input socket, VIDEO/AUDIO output socket, Variable audio output socket.

Dimensions: Height .....597 mm Width .....732 m Depth .....495 mm

Mass: 45.0 kg

Features: NICAM and German stereo, ON/OFF-timer, No signal off, Blue back screen

Specifications are subject to change without notice.